



[Baby Pamphlet with Index.]

HOME SECRETARY'S DEPARTMENT, QUEENSLAND

The
Queensland Mothers' Book



Issued for general information by direction of the
HON. J. C. PETERSON, M.L.A.
(Home Secretary of Queensland).

CONTENTS.

	Page.
PART I.—BABY CLINICS	7
PART II.—CARE OF THE BABY—	
Chapter I.—Essentials for Baby's Health	10
„ II.—Infant Feeding	15
„ III.—Care of the Baby	36
„ IV.—Your Child's Teeth	47
„ V.—Feeding Young Children ..	53
„ VI.—Baby Clothing	58
„ VII.—Sick Babies	64
„ VIII.—Some Emergencies	82
„ IX.—Simple Recipes	86
PART III.—MATERNITY—	
Advice for Expectant Mothers ..	91

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Preface.



Mothers of Queensland!

This is **your** book, to guide you in your perplexities and to help you in your difficulties. Most of the troubles of babies and small children come from want of knowledge. It is far better to be wise beforehand than to be sorry afterwards. So give this book a fair chance. Sit down and read it **now**. Then put it away carefully where you can find it when you want it. It may save your baby from much suffering; it may even save his life.

This book is written for the good of all babies and toddlers up to school age—the future men and women of Queensland. Go forth, little book, and do all the good you can!

“I will go with thee and be thy guide,
In thy most need to go by thy side.”

Index.



	PAGE.
Acid Drinks	86
Acid Tooth-wash	86
Addresses of Various Clinics	8
Adenoids	66
Advice for Expectant Mothers	91
Albumen Water	86
Ante-natal Clinics	91
Artificial Feeding	20
(a) Condensed milk 25	
(b) Cow's Milk 21	
(c) Dried Milk 26	
(d) Guide to, after nine months	40
(e) Measurements for	20
Average Weights and Heights, Table of	37
Babies, Sick, General Treatment of	64
Baby's Bath	45
Baby's Bed	46
Baby, Care of	36
Baby Clinics	8
Baby Clothing	58
Baby's Food while Travelling	23
Baby's Progress	36
Baked Bread	90
Baked Flour	88
Barley Jelly	89
Barley Water	87
Binder	58
Bottles, To Clean	28
Bowels, Baby's	38
Bowels, Mother's	97
Breast-feeding	15
Breast-feeding, Advantages of	15
Breast-feeding, Difficulties of	18
Breasts, Care and Preparation of	96
Bronchitis	67
Broth, Mutton	87
Burns	82
Care of Baby	10, 36
Chicken-pox	68
Children's Teeth	47
Choking	82
Closets	65
Clothing	12, 98
Colds	67
Colic	68
Condensed Milk	25
Confinement	99
Confinement, Preparation for	99
Confinement, Probable Date of	92
Constipation in Baby	38
Constipation in Mother	97
Convulsions	83
Cow's Milk	21
Cradle-cap	68
Croup	69
Custard	89
Cuts	83
Diarrhœa	69
Diphtheria	71
Directions for Baby Patterns	58
Dirt and Disease	64
Dirt-eating	71
Disease, Prevention of	64
Dress Patterns	61, 62
Dried Milk	26
Dried, Skimmed or Creamless Milk	54
Dummy	29
Dysentery	69

	PAGE.
Ear, Discharge from	85
Ear, Things in	83
Economy	57
Eczema	71
Eggs, to Cook for Children	90
Emergencies, Some	82
Essentials for Baby's Health	10
Eye, Things in	83
Eyes, Care of	72
Feeding—	
(a) Artificial	20
(b) Breast	15
(c) Regularity	16
(d) Table for	22
(e) Of Children from 2 to 5 Years	53
(f) Of School Children	56
Feeding Bottles, To Clean	28
Flies	65
Flour-ball	88
Fresh Air	11, 94
Fruit Juice	28
Germinated Peas, Beans, and Cereals	88
Hard Things Swallowed	84
Health Rules during Pregnancy and Nursing	94
Healthy Motherhood	91
Height, Average	37
Home-made Lemonade	86
Hookworm	73
Impetigo	74
Infant Feeding	15
Infants, Premature	32
Jacket	62
Jelly—	
(a) Barley	89
(b) Oat	90
(c) Rice	90
Juice, Raw Meat	89
Knitted Singlet	59
Lactic Acid	24
Lactone Milk	24
Lead-poisoning	74
Lime Water	86
Maternity	91
Measles	75
Measurements for Artificial Feeding	20
Medical Advice, Need for	99
Milk—	
(a) Condensed	25
(b) Cow's	21
(c) Dried	26
(d) Lactic Acid or Lactone	24
(e) Peptonised	25
Miscarriage	98
Morning Sickness	98
Mumps	76
Mustard and Cress	57
Nightgown	61
Nits and Lice	76
Nose, Things in	84
Nursing Mother	100
Oat Cake	90
Oat Jelly	90
Objects of Baby Clinics	7
Patent or Proprietary Foods	26

	PAGE.
Patterns—	
(a) Dress	71, 62
(b) Jacket	62
(c) Nightgown	61
(d) Petticoat	60
(e) Vest	59
Peptonised Milk	25
Poisons, Treatment of	84
Pregnancy, Some Complications	98
Premature Infants, Care of	32
Prevention of Disease	64
Progress, Baby's	36
Prolapse of the Lower End of the Bowel	77
Prune Juice	87
Prune Pulp	87
Raw Meat Juice	89
Recipes—	
Albumen Water	86
Apple Pulp	88
Baked Bread	90
Baked Flour	88
Barley Jelly	89
Barley Water	87
Carrot or Swede	
Turnip Juice	87
Custard	89
Eggs, to Cook	90
Fish, Steamed	88
Fruit Juice for Babies	87
Fruit-acid Tooth-wash	86
Germinated Peas, Beans, and Cereals	88
Home-made Lemonade	86
Junket	89
Lime Water	86
Minced Liver	89
Minced Tripe	88
Mutton Broth	87
Mutton Stew	88
Oat Cake	90
Oat Jelly	90
Prune Juice	87
Prune Pulp	87
Raw Meat Juice	89
Rice Jelly	90
Sprouting Peas, Beans, or Cereals, To prepare	88
Tamarind Fruit Drink	86
Tartaric Acid Syrup	86
Vegetable Broth	87
Whey	89
Respiratory Infections	64
Rickets	77
Ringworm	77
Rupture	77
Scalds	82
Scarlet Fever	78
Scurvy	79
Sick Babies, What to Do for	66
Sleep	43, 96
Sore Throat	79
Special Exercises	94
Sprouted Peas and Beans	57
Summer Diarrhœa	69
Swollen Breasts	79
Tamarind Fruit Drink	86
Teats	28
Teeth, Care of	47, 95
Teething	47
Thread Worms	80
Thumb Sucking	31
Tinned Foods	26
Treatment of Poisons	84
Urine, Testing during pregnancy	97
Vegetable Broth	87
Vest, Knitted	59
Vitamins	27
Water, Albumen	86
Weaning	39
Weight, Average	36
Whey, To Make	89
Whooping Cough	79
Worms	80

The Queensland Mothers' Book

Part I.—BABY CLINICS.

Objects of the Baby Clinics.

1. To advise expectant mothers in matters regarding their own health and that of their babies before and after birth.

2. To visit all newborn infants within their districts so far as possible; to distribute leaflets and invite the mothers to visit the Clinics.

3. To encourage the natural feeding of infants as the best method of reducing sickness and mortality during the first year of life.

4. To help all mothers in the management and proper feeding of babies and children before school age.

5. To spread sound knowledge on which the rearing of healthy children depends, and to discourage all practices which are doing them harm.

6. To advise medical or hospital treatment for such cases as may need it.

7. To educate the women of Queensland in mothercraft, so that the next generation will be stronger, wiser, and happier than the present.

TO MEMBERS OF PARLIAMENT, LOCAL AUTHORITIES, DOCTORS, NURSES, AND ALL INTERESTED IN THE WELFARE OF BABIES AND YOUNG CHILDREN.

The primary object of an Infants' Clinic is the prevention of disease among babies and young children. In this it is sharply distinguished from a hospital, whose primary object is the cure of disease after it has arisen. The Clinic does not cover the whole field of prevention. It is unable to secure good housing, or the provision of good water and milk supplies and wholesome food. It cannot improve municipal sanitation, nor ensure the prompt removal of sewage and rubbish from houses. In the prevention of epidemic disease it can play only a minor part. All these matters must be dealt with wholly or chiefly by other agencies. But one cause of disease apart from all these it is its especial province to combat. Above all other factors the greatest cause of disease and death among the

young is want of knowledge. Wilful neglect of children is a very rare thing; but want of knowledge and the carelessness that is born of want of knowledge are very common. To them most of the ailments of the young can be traced, and by education, especially by education of mothers, must they be prevented. This education must be practical, it must be personal, and it must be given by those who combine medical and nursing skill and experience with infinite patience and persuasiveness. This is the main duty of the Clinic.

The Clinic endeavours to come into touch with all the mothers of newborn infants in its district who may be without, or have ceased to be provided with, medical or nursing assistance. But human nature being what it is, many infants and young children are brought to it who are already ill. In these cases it is the duty of the Clinic nurse to work in co-operation, wherever possible, with the mother's own doctor. Cases of an acute or urgent character or needing special treatment, who are unable to secure medical treatment otherwise, are referred to hospital. Slight or trivial ailments, or those whose treatment consists in a careful regulation of the diet, may be treated by the nurses under the supervision of the medical man attached to the Clinic. In this way the Clinic renders the hospital a double service. In the first place it relieves it of a number of trivial cases, and cases which require dieting rather than medicine, and so saves the time of the hospital staff. In the second place it sends promptly to the hospital many cases in an early stage, which might not otherwise reach it until the best time for treatment has passed.

BABY CLINICS.

Baby clinics are open daily at the following addresses at the hours mentioned. A doctor is in attendance once a week.

Hours.—Monday to Friday, 9 a.m. to 5 p.m.; Saturday, 9 a.m. to 12 midday. Closed on public holidays.

Central Clinics.

BRISBANE—

Fortitude Valley, Alfred street, off Brunswick street.

Herschel street, off George street.

West End, Boundary street.

Woolloongabba, Logan road, near Fiveways.

BUNDABERG—Maryborough street.

CAIRNS—Martyn street, Railway Reserve.

CHARTERS TOWERS—Gill street.

GYMPIE—Mellor street.

IPSWICH—Wharf street.

MACKAY—Gregory street.

MARYBOROUGH—Kent street.

ROCKHAMPTON—Corner Fitzroy and Dennison streets.

TOOWOOMBA—Royal street.

TOWNSVILLE—Stoke street.

WARWICK—Percy street.

WYNNUM SOUTH—Tingal road, Wynnum South.

Branch Clinics.

BULIMBA—School of Arts, corner Oxford street and Riding road,
Tuesday, 2 to 4.30 p.m.

KEDRON—Memorial School of Arts, corner Gympie and Broughton
roads, Tuesday, 2 to 4.30 p.m.

EDMONTON—C.W.A. Rooms, Fridays, 2 to 3 p.m.

GORDONVALE—C.W.A. Rooms, Fridays, 4 to 5 p.m.

BABINDA—C.W.A. Rooms, Wednesdays.

INNISFAIL—C.W.A. Rooms, Tuesdays and Thursdays.

ATHERTON—C.W.A. Rooms, Tuesdays and Wednesdays.

Part II.—CARE OF THE BABY.

Chapter I.—Essentials for Baby's Health.

Many babies die every year and many more suffer in health from want of knowledge. Only by knowledge as to the right way to treat our babies can we hope to obtain better results.

CLEANLY SURROUNDINGS.

The health of the nursing mother and the baby is greatly influenced by cleanly surroundings. There is much less danger of baby getting diarrhœa if the house and yard are kept clean, if the closet seats are securely closed against flies, and if food is kept covered from flies and dust.

The House.

All parts of the house must be freely ventilated and kept quite clean.

Refuse.

Burn all refuse behind the kitchen fire. What cannot be burned should be put at once into a metal garbage tin, and the tin kept carefully covered. The garbage tin must be scrubbed out with hot suds; a dirty garbage tin is a danger both to adults and to babies.

Yards, Sinks, &c.

Keep the yard clean. Dirty surroundings attract flies, and these contaminate and infect food. Drains, sinks, and water-closets must be kept clean by frequent flushing with water. The free use of clean water for this purpose is better than any disinfectant. Report immediately any block or other defect of the drains at the nearest Town Hall. Earth closets must be kept scrupulously clean, the seat carefully covered and flyproof, and the pan freely supplied with ashes or sawdust, or other deodorising material. The best deodorant for this purpose is a tablespoonful of kerosene every day.

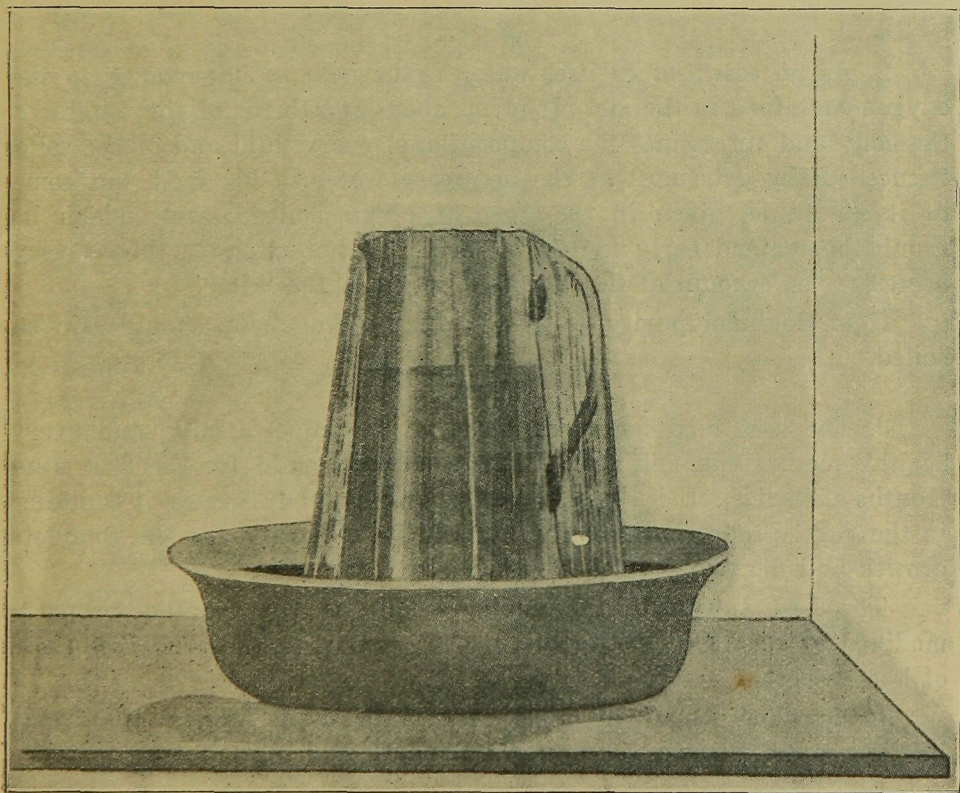
Food.

Keep all food, and especially milk, in a clean, cool, well-ventilated place, away from any position where bad air, flies, or dust can get to it. Unless you have an ice-chest, stand the milk-jug in a bowl of

clean water and cover with a piece of butter muslin or cheese-cloth sufficiently large to dip down into the water as shown in illustration. Keep it in the shade and exposed to the wind. This will keep the milk cool, and also protect it from flies. Use a clean piece of muslin every day, and scald the bowl out every morning.

WHAT EVERY BABY NEEDS.

If a child is to grow in both body and mind as it should do in the first year of its life, there are twelve things which it is essential that it should have. These have been called "The Twelve Essentials," and too much stress cannot be laid on their importance. They are—



Fresh Air.

1. Baby must have abundance of pure fresh air night and day. Remember that the body is built from the blood and that the blood is purified by the air we breathe. Blood cannot be purified by impure air. Therefore, see that the room in which baby lies, both day and night, is well ventilated. Ventilation means a constant current of air across a room, and this cannot always be secured by one open window. On warm, still nights, windows on both sides of room, or door and window, should be open. Fresh air is necessary at night as well as in the day. It is foolish to be afraid of "night air." Keep baby out

of direct draughts, but do not be afraid of the air being cool. Pure, cool air is invigorating and prevents "catching cold." Warm, stuffy air is poisonous and devitalising, and makes him catch cold easily. Keep him in the open air as much as possible. His eyes are at first very sensitive to bright light and must be protected. Never cover a young baby's face with a handkerchief or other covering, no matter how light and fine. The breath of the infant cannot escape freely from under it, and he breathes this impure air over and over again.

If the other essentials for his health are attended to, pure, cool, outside air will make baby bright, keen for his food, contented, and a sound sleeper.

Water.

2. As an essential to life, water ranks next in importance to the oxygen contained in the air. It forms about two-thirds of the weight of the body and enters into the composition of every fluid and of the solid tissues. Baby gets most of the necessary water in his food, but some of it should be given in the form of plain, boiled water, which he should be trained early in life to take. In hot climates this is very necessary, on account of the increased action of the skin.

If of doubtful purity, the water for bathing baby should also be boiled.

Food.

3. The best food for every baby is its mother's milk, and every healthy mother can and should nurse her own child for the first nine months of its life. It is the only perfect infant food, because it contains, in the right proportions, all the ingredients necessary for the complete growth and development of the child.

The best substitute for mother's milk is cow's milk, properly modified so that its constituents are, as nearly as possible, like those of human milk.

If dried or condensed milks have to be used, be sure that they, like the cow's milk, are of the right strength and ingredients.

In addition to the best food available, there must be regularity in times of feeding.

Clothing.

4. Must be light, porous, loose, non-irritating, and suited to climatic conditions. In cold climates the aim must be to keep the child comfortably warm; in hot climates to so clothe him that he suffers as little as possible from the heat. (See also chapter on clothing.)

Bathing.

5. The daily bath is necessary for the health of the child. In addition to cleansing, it helps to keep the pores of the skin in a healthy state.

Muscular Exercise and Sensory Stimulation.

6. If you want a baby to thrive, and to be active and strong, you must let him exercise both muscles and senses. From the earliest days baby should work for his living. Crying and vigorous sucking are forms of exercise for the very young infant. Later, the baby by its activity in kicking, grasping, &c., gets the additional exercise it needs. His senses also need stimulation. The daily bath is not only for cleanliness, but is a form of exercise, in that it educates his sense of feeling. Sight can be exercised by placing baby where he can watch the waving branches of a tree, and so on. Sensory stimulation is also provided by such things as fresh air and sunshine and the daily outing.

In illness an attempt must be made to sustain the tone and activity of the muscles, by such things as change of position, judicious handling, and good nursing. Even when ill, baby can have the sensory stimulus of fresh air and sunshine, and as he improves, bathing, outing, &c., must be added as soon as the doctor permits.

Warmth.

7. The bodily warmth needs to be evenly maintained. In cold climates, clothe so that all parts of the body except the face are protected from chill. If the body is warm, pure cold night air will do no harm. In hot climates, the aim has to be to keep the child cool, but remember that young children chill quickly. Cold feet or hands may cause colic.

Warmth is a vital necessity for premature infants.

Regularity of all Habits.

8. Regularity in baby's life should begin when he is born. In particular there must be clocklike regularity of feeding, regularity of sleeping and exercise, and daily regularity of action of the bowels.

Cleanliness.

9. There must be cleanliness in everything. If baby is artificially fed, the food and feeding utensils must be scrupulously clean.

Never leave dirty linen in baby's room. Remove soiled napkins immediately and place them in water. Disinfect the hands after handling napkins.

Mothering.

10. Proper handling and mothering of a baby are necessary for the best growth and development. Babies who are allowed to lie all day passively in cots and who have no mothering tend to be pale, flabby, and languid, and may get a wasting disease called marasmus.

An artificially-fed baby should never be allowed to lie in a cot while taking his bottle. He should, when being fed, be held in a

position as nearly as possible like that of a child being fed at its mother's breast. Every baby should be taken daily for a walk in the fresh air.

He should not be nursed all the time he is awake—baby grows and thrives better if left to kick and amuse himself, but he should not be left too long unnoticed or in the same position. Turn him from side to side, or prop him up with pillows. A change of position is a relief and rest for baby, just as it is for older people, and it also gives the attention which, with other things, means the “mothering” of the child.

On the other hand, too much attention can do much harm. Baby should not be patted, shaken, or jogged after feeding. How would the average grown-up person feel if treated in such a way after a meal? Do not constantly play with and talk to him; it is tiring to his brain, and a strain on his nervous system. He should be left to amuse himself, and his own fingers and toes are, at first, his best playthings.

Too little attention and lack of mothering may result in the child being unhealthy and marasmic.

Too much attention may upset his digestion and nervous system, and turn him into a spoilt little tyrant.

Management.

11. This consists in faithfully carrying out all the essentials for the child. If baby is asleep do not be afraid to wake him when his feeding time comes round. After being wakened a few times he soon learns to wake himself at the right time. Do not feed him or give him a dummy because he cries. Teach him to understand that he cannot get his own way simply by crying for it. By your own example teach the child to have faith in you. Never make him a promise that you do not intend to keep.

Rest and Sleep.

12. These depend mainly on the carrying out of the above essentials. If baby is fed, clothed, cared for, and managed properly, he will sleep well. Therefore, if he does not sleep, look for the cause, and try to remove it.

Chapter II.—Infant Feeding.

BREAST FEEDING.

Every mother should realise how important it is that her baby should receive his natural food; that is, his mother's milk. That milk has been supplied for him by Nature, and is adapted to his special needs. Doctor Sir Truby King says: "A woman's milk is not her own. It is created for her baby, and the first duty of a mother is to ensure, by foresight, a proper supply of the only perfect food—the baby's birthright."

Almost all mothers can feed their babies if they desire to do so. If they have not quite a sufficient supply of milk for the baby's full needs he must not be weaned on that account. Give him what there is, and finish his feeding with a little artificial food sweetened with milk-sugar only. At the same time, try to increase the breast milk supply. This can and should be done. Any Baby Clinic nurse will show you how to do it. Even a little mother's milk is very valuable for the baby, and helps him to digest any artificial food which may be necessary.

ADVANTAGES OF BREAST FEEDING.

Here are some of the reasons why breast milk is best for baby. It contains in the right proportions all the food ingredients necessary for the growth and development of the child.

The death rate among breast-fed babies is much lower than among those artificially fed. Statistics tell us that, of the babies who die in their first year, a very large percentage are bottle babies. A breast-fed baby is much less likely to contract disease than one who is artificially fed, and further, if disease is contracted, the baby fed on his mother's milk makes a quicker and better recovery than does the bottle-fed baby.

The child who is breast-fed during his first year is stronger and healthier during his second year than the one who has been artificially fed.

Mother's milk is always ready; there is no troublesome preparation of bottles, and mixing of foods. Thus it is a great saving of time for the mother.

Mother's milk is always the right temperature, and is germ-free.

By feeding baby in the right way, much money is saved that would, for the bottle-fed baby, have to be spent on infants' foods, bottles, teats, bottle brushes, &c. So give baby what Nature meant him to have—his mother's milk.

In addition to all of these reasons, the baby who is dependent on his mother for the food he receives is more devoted to her than the

child who is satisfied to be fed out of a bottle, by anyone; and the mother more dearly loves the baby whom she has fed with her own milk.

THE FEEDING OF THE NEWBORN BABY.

On the treatment and training which an infant receives in the first weeks of life depends greatly its progress during the ensuing twelve months. The opinion is frequently expressed that the newborn baby is too young to be trained; this is a mistake. Even very young babies quickly acquire habits, and it is important that they should be of the right kind.

To delay training until he is a few months old may, and probably will, result in giving mother or nurse a great deal more trouble, and the baby much unnecessary distress. So begin as you mean to go on.

The feeding of the new baby is a most important matter, and probably more mistakes are made on this than any other point in the management of infants.

Most babies, when born, know how to suck. It is seldom we find one who cannot do so. This is because, for long ages past, babies have been fed at their mother's breasts, and at birth the sucking instinct is present. This instinct must be developed, but care taken that it is done on the right lines. It must not be either under-developed or over-developed. If baby, who very often in these first days of life is very sleepy indeed, is allowed to sleep undisturbed, he may, at the end of a day or two, be very unwilling to work for his living. For that is what sucking is to a baby, and there is no more difficult child to manage than the one who has not been trained to suck properly. Feeding him from a feeding-bottle, with a hole in the teat so large that the fluid pours down his throat without effort on his part, will also result in disinclination to suck.

The instinct can be over-stimulated by putting baby too frequently to the breast, or by leaving him there for too long a time. Also by giving him a dummy to suck constantly.

Vigorous sucking is necessary for his health, but it should be done regularly, and at proper feeding time only. In the early months of life it forms a very important part of baby's daily exercise, for not only does it develop jaws and mouth, but it improves the circulation of the whole body.

There is another reason why baby should be trained to correct feeding habits early. We all know that the mother's full milk supply does not come in until the end of the second or the beginning of the third day after baby's birth. But before the milk comes in there is a little creamy-looking fluid in the breasts. This the baby should have, for although there is very little it has high food value, and at this time

no other food can take its place. In addition, the mother's health also is benefited, and she makes a quicker recovery if baby is put regularly to the breast at this time.

Put baby to the breast within about six hours of birth, as soon as the mother has rested, leaving him only about two minutes at each breast. See that he is actually sucking and not dozing. It will be sufficient to do this once every six hours for the first day. On the second day, leave him three or four minutes at each breast, and feed him every four hours. On the third day, when the milk supply is usually established, put him to the breast every three hours, and leave him about fifteen minutes. The average baby takes from fifteen to twenty minutes to feed. A strong baby may get all he wants in ten minutes. No baby should be left at the breast for longer than thirty minutes, and it is only delicate babies, or those who suck feebly, who should require so long.

Alternate the commencing breast; if you begin by giving the baby the right breast for his first feed, commence with the left for the second, the right again for the third, and so on.

Big, strong babies generally do well if fed every four hours—that is, five feeds daily (6 and 10 a.m., and 2, 6, and 10 p.m.), from the third day. Others are better on three-hourly feeding, six feeds daily (6 and 9 a.m., 12 midday, and 3, 6, and 10 p.m.), until they are about three months old. After that time, four-hourly feeding suits most infants, but never jump suddenly from three to four hourly feeding. Increase the intervals by a quarter of an hour every second or third day, until a four-hourly interval is reached. This can be done without baby being aware that any change is being made.

To all healthy babies give no night feeds from birth. This is most important. If this is done from the start of life, baby learns to take all that he needs in the daytime. This allows him and his mother to get the regular, uninterrupted night's sleep which both require. A baby trained from birth to have no night feeds takes, during the day, all he requires to satisfy his hunger, and for his growth and development. If fed in the day only, he obtains just as much as if he were being fed both day and night. For example, careful weighing of children before and after feeding has shown that a child having, say, 30 oz. of food in the twenty-four hours, and given six feeds a day, takes 5 oz. at each feed; while if he is fed ten times a day he takes 3 oz. at each feed; thus obtaining exactly the same quantity of food in the twenty-four hours.

But this training must start at birth. A baby accustomed to being fed night and day will protest vigorously if his mother suddenly lengthens his feeding intervals. He has been trained to frequent feedings, so takes only sufficient to satisfy his hunger for that period. But when started from birth on regular three or four hourly feeds,

with no night feeds, he never expects anything else. So keep absolutely to regular feeding times; make no exceptions. To do so one day will almost certainly result in the baby demanding the same concession the next day. Never hesitate to wake baby during the day when feeding time comes round. Very soon he will learn to wake himself at the right time. If he is allowed to sleep over his feeding time during the day, he cannot be expected to sleep all night. He will not have had his full supply of food, so will be hungry and restless.

There is still another very important point. Mention has already been made of the fact that the mother's milk does not come in until the second or third day. As a result, many people think it their duty to give baby artificial food during this time. This is a great mistake, which can lead to much trouble, and in many cases has been responsible for the unnecessary weaning of the baby.

If baby required food during the first two days of his life, Nature would supply it. The very fact that it is not there, proves it to be unnecessary. As previously mentioned, baby needs the little fluid there is in the mother's breasts at that time, and should be put regularly to the breast to obtain it. Beyond this, nothing but plain boiled water should be given. Babies who are fed on sweetened water or condensed milk as their first food, not infrequently refuse to take their natural food later. The reason is simple. Cane sugar, which sweetens both sugar and water and condensed milk, is very sweet. Mother's milk contain different sugar, called sugar of milk; this is only faintly sweet. Babies like sweet things, and show their preference by refusing to take their proper food.

DIFFICULTIES OF BREAST FEEDING.

Every healthy woman can suckle her baby. The exceptions are extremely rare. If the mother is not healthy, medical advice should be sought.

The coming of the milk depends more on the baby's sucking than on anything else. If the nipples are flat and ill-formed, the baby cannot suck properly. He soon gets tired, and the milk does not come. If the baby is pacified with dummies and spoon-feeding he will not suck, and the milk does not come. A good nurse will help the mother through her difficulties, but the nurse should be given a chance to correct flat nipples before the baby is born. A bad nurse will put the baby on the bottle.

WHY BREAST FEEDING SEEMS TO DISAGREE.

1. The Baby is Overfed or Fed too often.

Perhaps he is a fine, fat baby, but he is not a happy baby. He seems to be troubled with "wind." He has stomach-ache often, and he roars. At night he keeps the whole family awake, and even disturbs

the neighbours. He passes large motions with undigested milk in them. Perhaps he is not so strong, and his motions are green, and he begins to lose weight. His mother thinks he is not getting enough, feeds him oftener and makes him worse. Some foolish friend is sure to say that the mother's milk does not agree with the baby and he should be weaned. **This is very bad advice.** Baby is suffering from too much of a good thing. Feed him less often. He will do better on four-hourly feeding. Keep him fewer minutes on the breast, and do not let him get so much of the "strippings"—perhaps fifteen minutes, perhaps ten, may be enough. Sometimes a tablespoonful or two of warm water given before sucking prevents his taking too much. A little water may always be given between feeds if it pacifies him.

2. The Baby is not Satisfied,

because he is not getting enough. He does not gain weight as he should, and he seems to be always hungry. Perhaps breast feeding has never been properly started, because the nipples were malformed, or the nurse was careless. Perhaps the mother is not very strong, and had plenty of milk while resting, but not enough while doing hard work. She is discouraged and gives the baby a bottle once or twice a day. **This is a mistake.** Her breast milk begins at once to lessen; perhaps the baby refuses to take the breast, then the milk disappears altogether.

The mother cannot increase her milk by eating more food, unless the want of milk was due to partial starvation. She cannot increase it by patent medicines, nor by drinking "stout," which is generally harmful. A reasonable amount of wholesome food she should take, but not more. The baby must be put to the breast at regular intervals for the mother to retain what milk she has. Let him suck while he is hungry and empty one breast thoroughly before he is given the other. Commence with the right or left breast at alternate feeds. This will encourage the breasts to secrete more milk. Then if he is unsatisfied give him a little artificial milk. It is best to give it unsweetened, or with milk sugar—not common sugar, so that he may not grow too fond of it; and, if possible, with a spoon, lest he like his bottle too much. A skilled nurse can often by massage and hot and cold douching increase the flow of milk to the breast, as long as there is milk in the breast. If at last you are driven to wean him, you may have got him past the most dangerous early months, and you will have weaned him gradually.

3. The Baby with an Over-excitible Stomach.

Many babies have the habit of bringing up a teaspoonful or two of curdled milk after feeding. This is not vomiting; it is what the old nurses used to call "possetting." It is messy, but of no further consequence if the baby continues to thrive. But some babies bring up

large quantities—perhaps soon after feeding, perhaps some time after. They appear uncomfortable until relieved by vomiting, and although their motions may be perfectly digested they are poorly nourished. If the baby loses weight rapidly it is a serious matter, and medical advice is necessary. Unfortunately too often the mother thinks the breast milk disagrees, and puts the baby on artificial food, on which it gets worse than it was before.

These babies are often intelligent and precocious. They need very quiet treatment and no excitement. They often do better with small feeds at short intervals. Though very slow to gain weight, they usually do well in the end.

ARTIFICIAL FEEDING.

To give artificial food to a young baby is to undertake a very serious responsibility. You want to be quite sure (1) that artificial food is really necessary, and (2) that you are giving the best obtainable substitute for the natural food, and are giving it in the best way. This is especially true in the case of a very young or weakly baby. If it is ~~not~~ really necessary, you may be making a fatal mistake. If the food is unsuitable, or given wrongly, the baby may be starved or made very ill. After the first six months the risks are less, but even then serious injury may result. Babies vary very much in their powers of digestion. The food on which one baby thrives, is often a food on which other babies waste.

Never, therefore, fail to obtain the best advice possible. Visit the nearest Baby Clinic, and the nurse will be only too pleased to give you all the help she can, all the more pleased that you have consulted her **beforehand**. So many mothers try various foods on the advice of friends or influenced by reading advertisements, and upset their babies before taking the best advice. If you have done this, delay no longer, consult your doctor or the Clinic before your baby gets worse. The Clinic nurse will make a special study of your baby, and find out by careful trial what agrees with it best, for no two babies are quite alike. The perfect artificial food, which never disagrees, is found only in advertisements, not in real life.

Milk is the only food for babies. When good fresh cow's milk is available, this is better than dried or preserved milk. Fresh goat's milk is probably equally good, and may be used instead of cow's milk when this cannot be obtained of good quality.

Measurements.

In artificial feeding careful measurements are necessary. Great mistakes are made in measuring with teaspoons and tablespoons. For instance, a tablespoonful should measure half an ounce, but most tablespoons hold nearly a whole fluid ounce. It is, therefore, necessary

either to use a medicine glass, or to use the feeding bottle, the marks on which are usually fairly accurate. If you are in doubt about that, the Clinic nurse or your chemist will compare them with the medicine glass, or you may do this yourself. For small quantities you may use a Clinic teaspoon or tablespoon, which can be obtained from any chemist.

In measuring sugar and other powders always use a Clinic spoon. Be careful to leave the powder quite loose, not pressed down at all, and to level it by passing the back of a knife held at right angles across the top of the spoon. All spoonfuls should be **perfectly flat spoonfuls**.

Feeding with Cow's Milk.

The milk must be scalded as soon as possible. Raw milk is dangerous unless it is very fresh, very clean, and comes from cows known to be free from tuberculosis. Boiled milk is easier to digest than raw milk. So long as the baby is given a little orange juice every day, after it is two or three months old, there is no disadvantage in using boiled milk. The simplest method is to put the milk in a small saucepan and take it off the stove as soon as it begins to boil. If pasteurised milk (that is, milk that has been heated sufficiently to kill most of the bacteria it contains) delivered in sealed bottles is being used, it should not be boiled, unless it has to be kept more than twelve hours, when it should be boiled after that time.

It is quite impossible to give a diet scale for feeding babies artificially that will be suitable for all babies. Nor is it possible to instruct all mothers in the methods used by our Clinic nurses, who have received a special training. Nor is it possible to say whether any particular diet will agree with any particular baby without careful trial. This is why we so earnestly advise you to go to the nearest Baby Clinic. It is only because so many mothers are too far away from doctors and Baby Clinics that we give the following simple diet scale.

Before you can use this scale you must weigh the baby carefully, and while using it you should weigh him once a week. Feed your baby by the clock and wake him if necessary. He will soon form regular habits. Give five feeds a day at four-hourly intervals—6 a.m., 10 a.m., 2 p.m., 6 p.m., and 10 p.m. This is best for most babies, but there are small and weakly babies who do better on six feeds, given every three hours—6 a.m., 9 a.m., 12 noon, 3 p.m., 6 p.m., 9 p.m. Give nothing between meals except half or one teaspoonful of orange juice once or twice a day, and boiled water when baby is thirsty.

Ordinary sugar suits most babies; milk-sugar may be used in special cases. When there is a tendency to constipation, 1½ flat teaspoonful of "Maltogen" or "Mellin's Food" may be substituted for 1 teaspoonful of sugar.

Diet Scale.

This diet scale is purposely made on the low side. A healthy baby, especially if of low weight for his age, may need more nourishment. If, therefore, your baby is digesting well the amount of food according to this scale, and is not satisfied, you must cautiously and gradually increase the amount of his food as advised below:—

Four-hourly Feeding, 5 Feeds in 24 Hours.

Weight of Baby in lb.				Milk.	Water.	Sugar.	Total Quantity.
				Oz.	Oz.	Flat teasp.	Oz.
6	..	..	..	2	2	1 $\frac{1}{4}$	4
7	..	..	..	2 $\frac{1}{4}$	2	1 $\frac{1}{2}$	4 $\frac{1}{4}$
8	..	..	..	2 $\frac{1}{2}$	2	1 $\frac{3}{4}$	4 $\frac{1}{2}$
9	..	..	..	2 $\frac{3}{4}$	2 $\frac{1}{4}$	2	5
10	..	..	..	3	2 $\frac{1}{2}$	2	5 $\frac{1}{2}$
11	..	..	..	3 $\frac{1}{4}$	2 $\frac{3}{4}$	2 $\frac{1}{4}$	6
12	..	..	..	3 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6
13	..	..	..	3 $\frac{3}{4}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6 $\frac{1}{4}$
14	..	..	..	4 $\frac{1}{4}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$	6 $\frac{1}{2}$

Three-hourly Feeding, 6 Feeds in 24 Hours.

Weight of Baby in lb.				Milk.	Water.	Sugar.	Total Quantity.
				Oz.	Oz.	Flat teasp.	Oz.
6	..	..	..	1 $\frac{1}{2}$	2	1 $\frac{1}{4}$	3 $\frac{1}{2}$
7	..	..	..	1 $\frac{3}{4}$	1 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$
8	..	..	..	2	1 $\frac{3}{4}$	1 $\frac{1}{2}$	3 $\frac{3}{4}$
9	..	..	..	2 $\frac{1}{4}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$	4
10	..	..	..	2 $\frac{1}{2}$	2	2	4 $\frac{1}{2}$
11	..	..	..	2 $\frac{3}{4}$	2 $\frac{1}{4}$	2	5
12	..	..	..	3	2	2	5
13	..	..	..	3 $\frac{1}{4}$	2	2	5 $\frac{1}{4}$
14	..	..	..	3 $\frac{1}{2}$	2	2	5 $\frac{1}{2}$

Measure the milk and water in a measure-glass, or according to the marks on the feeding bottle. Measure the sugar in a Clinic teaspoon.

If your baby is unaccustomed to cow's milk, or has had a digestive upset, do not put him on this scale at once. Give him less milk, perhaps half the quantity, and more water, and increase the milk gradually, lessening the water at the same time. Watch his motions to see that he is digesting the milk.

If he is getting his food according to the scale and is still hungry, you will gradually increase his food until he is taking that of a baby weighing 1 lb. more. That is to say, a baby weighing 6 lb. will be

getting the amount advised for one of 7 lb., and so on. If he is still hungry, add drop by drop "Hypol" or "Scott's Emulsion" until he is getting five or perhaps ten drops in each meal, or a quarter or a half or one flat teaspoonful of "Clinic Emulsion" each day divided between his feeds. The small, underfed, but still vigorous baby may need the extra food; the large, fat, placid baby will probably not need it. No one method will suit every baby, and a diet scale is valuable only as a general guide. The mother should ask herself, "Is the baby digesting his food, or is he passing undigested milk in his motions?" "Is he satisfied and happy?" and if not, "Does he cry because he is hungry, or because he is uncomfortable and troubled with colic and wind?" And finally, "Is he gaining weight?" If he is troubled with pains and passes undigested motions, he is getting too much food, or food he cannot digest. If he cries with hunger and does not gain weight, he needs more food, and, provided his motions are well digested, the amount of milk may be increased gradually. In cases of indigestion the milk must be greatly reduced, or even stopped altogether for a day or two (giving whey instead), and then gradually worked up again. Overfeeding is a very common mistake. If baby is happy and gaining weight, he is getting enough; to give him more will make him sick. Feel your way carefully when you increase his diet.

Some babies have much difficulty in digesting cow's milk. This difficulty may be overcome by giving citrated milk, lactic acid milk, or peptonised milk. These methods are advised especially for very young or weakly babies.

Baby's Food while Travelling.

With breast-fed babies the mother should have no difficulty. Babies fed on cow's milk are frequently upset while travelling by rail or steamer. Railway carriages are very unsafe places for keeping milk, especially in hot weather. Unless very carefully packed in ice the milk goes bad very quickly. Thermos flasks are very dangerous holders of milk and should not be used for the baby's milk. It is dangerous also to procure milk from refreshment rooms, &c., as such milk can never be quite trustworthy.

In any journey lasting more than three or four hours it will be safer to carry some good dried milk, or for very young babies condensed milk, and to use this for preparing baby's food for the short time the journey lasts. Boiled water can always be obtained at the stopping places. As the baby is not used to this food, give it rather less than full strength. At the journey's end return to the baby's former food.

Citrated Milk.

Two grains of citrate of soda, which is made up in little tablets, are added to each ounce of cow's milk, but not more than four grains

should be given at a time. The citrated milk is given in the quantities already advised. It is sometimes useful as a temporary food to be discontinued after one or two months.

Lactic Acid Milk.

The three digestive substances secreted by the infant stomach are rennet, pepsin, and hydrochloric acid. Cow's milk requires for its digestion considerably more acid than does human milk. Strong healthy babies can usually produce all the acid needed, but babies with weak digestive power cannot always do so. For them, and especially for newborn babies, when these have unfortunately to be fed on cow's milk, and for babies whose digestion has been impaired by many weeks of unsuccessful attempts at artificially feeding, the addition of acid to the milk is extremely useful, and is better than giving citrated milk.

The best acid for this purpose is lactic acid, and the most convenient method is the addition of lactone syrup to the milk. Lactone syrup contains a small quantity of lactic acid added to corn-syrup, that is to a mixture of sugars prepared from maize. It should be procurable from all chemists.

In the case of a young or delicate infant it is best to commence with equal quantities of milk and water. The milk must be first scalded (brought to the boiling point for one minute) and the water boiled. To half a pint of milk mixed with half a pint of water, and cold, add 1 oz. of lactone syrup, a few drops at a time, stirring vigorously with a spoon; or prepare half these quantities. The milk is curdled, but in such fine particles that it will pass through an ordinary feeding teat. Unless the milk is cold, the syrup added gradually, and the mixture well stirred, the particles will be too large. When more food is required add the ounce of syrup to 11 oz. of milk and 9 of water, or 12 of milk and 8 of water, or 13 of milk and 7 of water. You will need two glass measures, procurable from any chemist, one measuring 1 oz., the other measuring 16 or 20 oz., and graduated into ounces.

The following **diet scale** may be used:—

Three-hourly feeding, 6 feeds in 24 hours.—

Lactone milk made with 1 oz. of lactone syrup to 10 oz. of milk and 10 oz. of water, or half these quantities—

Commence with 3 oz. of the mixture with $\frac{1}{2}$ oz. of added water in each feed.

Increase to $3\frac{1}{2}$ oz. without added water.

Gradually increase to $3\frac{3}{4}$, 4, $4\frac{1}{4}$, and $4\frac{1}{2}$ oz.

Then make the Lactone milk with 1 oz. of lactone syrup to 11 oz. milk and 9 oz. of water, or half these quantities—

Commence with $4\frac{1}{2}$ oz. in each feed. Gradually increase to $4\frac{3}{4}$ and 5 oz.

Then make the Lactone milk with 1 oz. of lactone syrup to 12 oz. of milk and 8 of water, or half these quantities—

Commence with 5 oz. in each feed. Gradually increase to $5\frac{1}{4}$ and $5\frac{1}{2}$ oz.

Then make the Lactone milk with 1 oz. of lactone syrup to 13 oz. of milk and 7 of water, or half these quantities—

Commence with $5\frac{1}{2}$ oz. at each feed. Gradually increase to $5\frac{3}{4}$ and 6 oz.

When the baby has gained two pounds or more in weight, he will probably be able to digest cow's milk without lactic acid. Try him on half the quantity of lactone syrup, adding one small flat teaspoonful of sugar to each feed. If he does well on this for one week, put him on to the same proportions of milk and water without any syrup, but with two small flat teaspoonfuls of sugar in each feed.

Peptonised Milk.

This is milk that has been partly digested. It is troublesome to prepare and should be given only when other methods of feeding have failed. It is not suitable for babies who are suffering from "gastro-enteritis." Its chief use is with very delicate babies during the early weeks or months.

The mixture of two parts of milk with one part of water should be raised to blood heat, the peptonising powder added, and the mixture kept at this heat by standing the jug in moderately hot water for half an hour or longer until it gets a slightly bitter flavour. It is then poured into a saucepan and brought quickly to the boil, then cooled, after which it can be kept cold for twelve hours, but must be prepared fresh twice daily. One or two flat teaspoonfuls of sugar, or two teaspoonfuls of maltogen, may be added to each feed. When the baby has gained a pound or two in weight, the time during which the milk is peptonised should be gradually reduced, so that the baby is gradually accustomed to digest the milk without peptonisation.

Condensed Milk.

This is a concentrated milk containing a large proportion of added sugar. It is sometimes useful as a temporary food for very young or weakly babies. One flat teaspoonful in 3 oz. of boiled water may be given at first—that is, one part of condensed milk in twenty-four of water—and this should be gradually increased until the baby is taking 1 in 8, or one teaspoonful in each ounce, giving 3, 4, or 5 oz. Some use stronger mixtures than this, but it is better to gradually substitute cow's milk or dried milk, a little at a time, until the condensed milk is completely replaced. Babies may flourish for a time on condensed milk, but it contains too much sugar and too little milk to build up strong babies.

Dried Milks.

When good fresh milk cannot be obtained, we may have to use dried cow's milk, which is sold under the names of "Glaxo" and "Lactogen." This is an excellent food for babies with strong digestion, but is more expensive and less easily managed than fresh milk. Very young or delicate babies are often unable to digest dried milk. Dried milk powder is very compressible, and if it is pressed down in the measure the scale of feeding advised on the tins is often too high. It is better to measure it perfectly loose. It is a common mistake to give baby more dried milk than it can digest. Do not believe all you read in advertisements.

Sometimes a teaspoonful of maltogen may be added to each feed with advantage, especially if the baby is constipated.

Proprietary or Patent Foods.

There are a great many of these, but they can be divided into two classes.

Firstly, foods to be given with milk. These consist of cereals in which the starch has been acted on by malt. They are occasionally useful. Mellin's Food and maltogen, which contain no unmalted starch, are the most suitable for very young infants.

Secondly, foods which contain malted flour mixed with dried milk. We do not recommend the use of any of these. Though some babies have done fairly well on them, many have done very badly.

Tinned Foods.

There is no doubt that, owing to the constant reading of advertisements, many mothers have become unconsciously biassed in favour of tinned foods. They waste their money in buying some advertised brand of dried milk, when good fresh milk, which is a better food and cheaper, is easily obtainable. They will buy tins of expensive rusks, when those they can bake in their own ovens are at least as good. They are attracted by prettily-named foods containing dried eggs instead of giving their children good fresh eggs. They do not realise that for children who are no longer babies fresh butter, perhaps with the assistance of a simple emulsion of cod liver oil, is better than some expensively advertised substance with a fine name. This is a weakness to be avoided. Tinned or canned foods have their uses, but fresh foods, when obtainable, are always better.

Junket.

This is very easily made by adding sufficient rennet essence or tablets to warm fresh milk, and keeping it warm till it goes solid. Only perfectly fresh sweet milk should be used. The junket may be

sweetened and flavoured, and is sometimes useful for children who do not like drinking milk. It may be given with stewed fruit. It is not suitable for babies under one year.

Whey.

This is prepared by making junket with warm, fresh milk, breaking it up with a spoon, and letting it drip through a clean boiled rag without squeezing. The curds are strained off, the whey passes through, and is put into a saucepan and brought to boiling point.

Whey is not a complete food, but may be given for a few days in acute indigestion, or after attacks of diarrhœa. As the infant recovers and the motions become natural, small quantities of boiled milk are mixed with the whey and gradually increased until the baby gets back to milk food again.

Custard.

Custard made solely from milk and eggs is a valuable food for children, and may be given after the first year. Never give children custard made from custard powders. Do not make the mistake of giving both egg and custard at the same meal, or to babies in the same day.

VITAMINS.

Vitamins are substances which are present in foods in minute quantities, but are absolutely necessary for the preservation of health. All the necessary vitamins are present in fresh milk. The vitamins are present in varying quantities in fresh foods, but are often deficient or absent in tinned or canned foods. Four vitamins are well known and have been named alphabetically—A, B, C, and D.

Without Vitamin A young animals are unable to grow although supplied with plenty of food. Its deficiency also renders them very susceptible to various infections, to which they easily succumb.

The following substances are rich in this vitamin:—Egg-yolk, liver, and cod liver oil. It is also present in green vegetables, carrots, milk, butter, and suet.

Vitamin B is present in small quantities in milk. It is most abundant in the germs and outer skins of cereals, which are rejected in the making of white flour. Consequently, it is absent in white bread, but present in wholemeal bread. It is absent also in white polished rice, although present in the whole grain. The absence of this vitamin is the cause of the disease known as beri-beri. Its deficiency is a probable cause of constipation, liability to infections, and poor growth. Of all the vitamins, this is the most likely to be deficient in the Australian diet. It may be readily added to food in the form of bran—a nice and wholesome addition to porridge; or bemax—a preparation of the germs of wheat; or marmite—an extract made from yeast, which is rich in this vitamin.

If Vitamin C is absent, the very serious disease known as scurvy results. This vitamin is found in small quantities in fresh milk, more or less in all uncooked fruits and vegetables, and is especially abundant in orange juice and lemon juice. It is gradually destroyed by cooking. This is why we give orange or lemon juice to babies fed on boiled, dried, or preserved milks.

Vitamin D is present in the same substances as Vitamin A—that is, green vegetables, milk, eggs, butter, and especially cod liver oil. It is necessary for the proper development of the bones and teeth. Its absence causes the disease called rickets, in which the bones are enlarged at their ends, soft, and easily bent, causing various deformities. Vitamin D is formed in the human skin under the influence of sunlight, but the rays which accomplish this cannot pass through glass windows, so the sunlight should be taken out of doors.

It is very important that all pregnant women, babies, and children should have sufficient of all these vitamins in their food, and if you will read carefully what is here written, you will see that this is quite easy.

FRUIT JUICE.

After the first three months a bottle-fed infant must have fruit juice daily. Orange juice or sweetened lemon juice is best, but tomato, apple, or pineapple juice may be used. Commence with half a teaspoonful, in twice that quantity of water, once daily, and increase to a teaspoonful twice daily. If fruit cannot be obtained, the juice of swede turnips or carrots may be used. To obtain the juice, do not peel the vegetables, but wash well, and dip into boiling water for a few seconds. Then grate, and squeeze the juice out through muslin. Give this to baby twice daily between meals.

CLEANING FEEDING BOTTLES AND TEATS.

Feeding bottles should be of the type illustrated on next page. Note the rounded inside surface, so allowing of easy cleaning, the absence of valves, which are unnecessary, and an added risk of infection. The "Faultless" bottle, with broad, breast-shaped rubber top, is one of the best, but the rubber tops are more expensive to replace.

The boat-shaped bottle may be used, but is not so good.

Teats should fit directly on to the neck of the bottle without any intervening valve or screw. The hole in the teat must be small enough to prevent the milk from dripping into the child's mouth. It is of the right size when baby, sucking vigorously, takes his feed in twenty minutes.

To Clean Bottles.—Have ready always a soap jelly made by boiling $\frac{1}{4}$ lb. of shredded soap in 1 pint of water. Keep this in a preserving jar with a cover.

After baby's bottle is used, rinse immediately under cold running water, and then with warm water. Leave a little warm water in the bottle, dip a stiff bottle-brush into the soap jelly, then brush inside of bottle until perfectly clean. Rinse with clean water, and protect from dust and flies.

Before use wrap bottle in a small towel or piece of flannel, put in a saucepan, cover completely with cold water, which must be brought to the boil and kept boiling for two or three minutes.

To Clean Teats.—Rinse first in cold water (preferably under a tap), then in warm water. Place a teaspoonful of salt in your hand, and rub the teat briskly and firmly between your palms. This cleanses the outside of the teat. Repeat the process with the salt put inside the teat, and this should remove all the scum of milk from the rubber. If the inside of the teat is not perfectly clean, turn it inside out, and repeat the cleaning with salt. Rinse in boiled water, put on a clean saucer, invert a cup over it, and leave in a cool place until needed.

Before use place in boiling water for one minute, then into cold boiled water to cool it rapidly. This last helps to preserve the rubber. Heat, exposure to strong light, prolonged boiling, and soaking in water all cause rubber to perish.

Two teats and two bottles should always be kept.

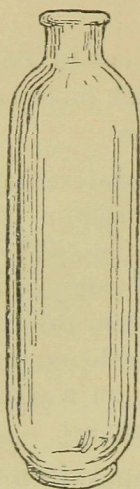
“ THE DUMMY.”

There is no surer sign of want of knowledge of the right way to manage a baby than the use of a “dummy.” Before many years the mothers of Queensland will learn this so well that they will be ashamed to be seen using it.

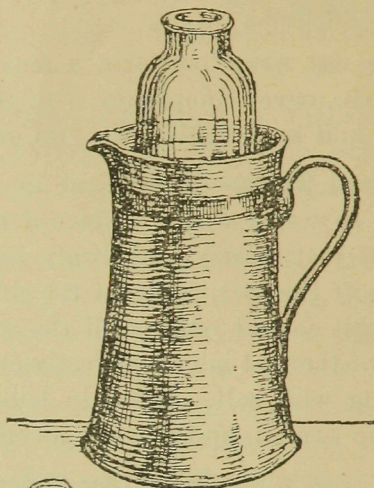
Reasons why you should not use a “ Dummy.”

1. In the newborn babe to suck is a natural instinct, and is the most powerful agent in establishing the secretion of breast milk. If this instinct is diverted to the sucking of a “dummy,” it is often partly exhausted before the baby is put to the breast. He does not suck vigorously, and in consequence the supply of milk becomes deficient. Soon he may prefer his “dummy” and the milk may disappear altogether. This is a common reason for failure to establish breast feeding.

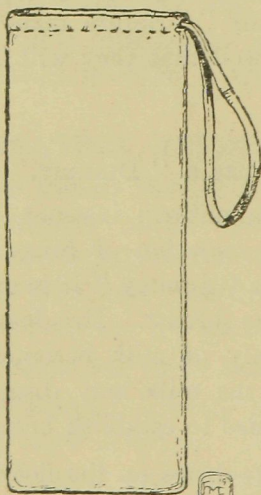
2. The “dummy” is a dirty thing. It drops on the floor and picks up dirt, which the baby swallows. If pinned to the baby's frock it is exposed to dust and flies. Every summer we have a serious epidemic of dysentery spread by flies. Mothers who use “dummies” during this season are exposing their babies to infection with a disease which is always grave and sometimes fatal.



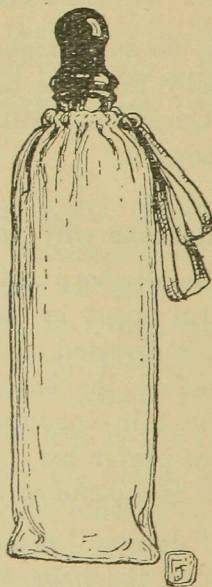
Bottle.



How to heat the mixture.



Bottle Bag.



Bottle bag on bottle.

3. Dummy-sucking, like thumb-sucking, interferes with the growth of the jaws and the development of the teeth. It favours the development of a high and narrow-roofed mouth and narrow nasal passages, which become easily obstructed.

4. The use of the "dummy" soon results in the formation of a bad habit, and may lay the foundation of a weak and self-indulgent character.

A baby never cries for a "dummy" until he has been trained to expect it, but there are a number of reasons why he may cry, and these should be known to every mother.

Why do Babies Cry?

The first thing a baby does is to cry. This is how he expands his lungs for breathing. A very young baby cries to strengthen his chest. Let him. In moderation, of course, a good healthy cry will do him no harm.

A baby cries because he is hungry. This also is healthy. If he cries after he is fed, it may be because he is not getting enough. The Clinic nurse will probably be able to increase the quantity of your breast milk. If not, she will advise you what to give him after each feed. Never put a breast-fed child on full bottle feeds. If you do this, you will soon lose what breast milk you have.

Very often a baby cries because he has colicky pains after feeding. Sit him up after the feed, or put him over your shoulder, so that he may easily get rid of the wind he has swallowed. If that does not soothe him, you may be giving him the wrong food, or too much of the right food. Over-feeding with breast milk is a common way of making crying babies. Perhaps giving the breast soothes him for a short time but makes him worse afterwards.

He may cry because he feels cross and irritable. This is usually due to over-feeding or giving the wrong food. Perhaps he is thirsty in hot weather and wants a drink of water, not milk.

He may cry because he is uncomfortable. Perhaps he has a wet napkin, or a tight binder, or too many clothes on a hot day.

He may cry because he wants his own way. You may have taught him to expect to be rocked to sleep, or to suck a dummy, and he cries because he knows that will bring him what he wants. It is very easy to teach a young baby bad habits; not so easy to break them.

If you want to be a good mother, try to find out why your baby cries. Do not treat him as if he were a bottle, and a dummy were the cork.

Sucking the Thumb and Fingers.

All babies put their fingers into their mouths. Mothers should watch that sucking the thumb and fingers does not become a habit. The

best way to prevent this is to put gloves or socks on the hands, or to put a strip of sticking plaster round the thumb. If the habit has lasted for some time it may be hard to break. Sucking the thumb deforms the front teeth, making them stick out in front, and so it makes girls grow up ugly.

THE PREMATURE BABY.

While most people know that when a baby is premature it needs special care and treatment, many have little knowledge of the special points which require immediate attention if the child is to have a reasonable chance of survival. Such babies, when born in a locality where there is a Baby Clinic, should be at once brought under the notice of the Clinic nurse, who is always willing to advise the mother, or to help her in carrying out the doctor's directions in the care of these cases. For the mother in the country, where Clinics and Welfare Nurses are not available, the following directions may be useful:—

If a baby is under 5 lb. in weight, when born, it is better to treat it as premature to get satisfactory results. But even those who weigh so little as only 2 or 3 lb. can often live and develop into strong, healthy children if the necessary care be taken.

In appearance, the premature differs from the normal baby in more than size. The little body is very soft and limp, the skin wrinkled, downy, and redder than usual. The infant is very weak and often too feeble to suck. The cry is feeble, and suggestive of the mewling of a young kitten. Often the baby cannot cry at all.

There are four points which must receive immediate attention. They are—

- (a) Prevention of chilling. (This is most important, and must be the first consideration.)
- (b) Careful feeding with mother's milk.
- (c) Careful avoidance of infection.
- (d) Avoidance of unnecessary handling.

Prevention of Chilling.

Because the baby has come too soon into the world, it chills very quickly. A premature baby who is allowed to become thoroughly chilled soon after birth rarely lives; therefore, when we know that an infant is to be born prematurely, special care should be taken to prevent this chilling. A small cot should be prepared, and by means of hot bottles, thoroughly warmed. Baby must not be bathed nor even oiled at first. As soon as it is born, wrap it in warmed cotton wool, or soft flannel, and place it in the warm cot. Six or eight hours later, if the child is then thoroughly warm, oil it with warm olive oil, using cotton wool swabs. Do this as quickly as possible, uncovering only a portion (say, one arm or leg) at a time, and also taking care to move or handle the baby as little

as you can. Very small babies should be oiled without being lifted from their cots, which should be screened from draughts while it is being done. In hospitals, cots are specially prepared for such babies, but special cots are not essential, and a very satisfactory and comfortable bed for the "prem" can be quickly improvised. Half of an old-fashioned "dress-basket" does splendidly, and failing this, the family clothes basket or a box can be used. To prepare the improvised cot, first line it with either brown paper or newspaper; this is to prevent the escape of heat. After this, and for the same reason, line the inside with blanket. A strip of old blanket or a wide woollen scarf can be used. To fix this, place it first outside the basket, so that it reaches from top edge to bottom, and fasten it securely, either with a string tied all the way round or by sewing through the blanket and basket at intervals. Having done this, turn the blanket over inside the basket so that it is completely lined, and also has a tidy top edge. Now throw a single blanket over the cot; it should not reach quite to the head of the basket. Place a thin firm pillow in the bottom, and a soft one over it, to form a mattress. A flannelette napkin will serve as a sheet, and a small folded fine towel as a pillow. At first a mackintosh may not be necessary, but later must be provided. Into this warmed cot baby is placed, wrapped in his cotton wool jacket, and covered with a soft shawl. Place a small light blanket over, letting it lie loosely on the child, and then draw the sides of the enveloping blanket across the cot, and tuck them in. But this is not enough. Premature babies chill so easily that more warmth is required, and this is supplied by hot water bags or bottles. Rubber bags are best, but if they are not available, stone ginger beer or ink bottles will serve. In cold weather three are required—one at the foot and one at each side. One bag is placed between the two pillows at the foot of the bed. The others lie, not against baby's body, but tucked down at the side, between the enveloping blanket and the mattress. For the bottle at the foot of the bed, use two-thirds boiling water and one-third cold water; for the side bottles, use equal parts cold and boiling water. These require to be refilled (one every hour in rotation) in winter. In summer, two bags are usually sufficient once baby is thoroughly warm, and they do not need changing so often.

Give baby plenty of fresh air. Keep him in a well-ventilated room. In our Queensland climate, the air, even in winter, is not cold enough to hurt the premature baby, provided his bed is kept properly warm. Guard against overheating. It is wise to have a dairy thermometer in the bed, and this should register between 85 and 95 deg. Fahr. Gradually decrease the artificial heat as baby's strength improves. Oil him every second day, taking the same precautions as for the first oiling. Do not put him in the bath until he weighs 5 lb. As he improves, commence with sponging—at first only face and hands, and gradually increase until he is being fully sponged, and later bathed.

Feeding is Very Important.

The healthy, normal baby thrives best if fed on his mother's milk. For the premature baby, natural feeding is even more necessary; in fact, few survive without it. Though the baby may live and thrive on an artificial food, he is much more likely to do so if he is fed on his mother's milk; and failing this, the milk of another healthy mother is the best thing. Sometimes a relative can be found who has a healthy baby of her own, and so is able to act as foster-mother. It does not matter if the foster-mother's baby is some months old; the milk will not hurt the premature baby on that account, though it may be necessary to dilute it, perhaps to half strength, at first. If there is any doubt as to the health of the foster-mother until a test can be made or the opinion of a doctor obtained, do not put the child to the breast, but feed from a spoon, and always boil the milk before it is given to the baby. If only a small amount of breast milk is available from either mother or foster-mother, give that first to the baby, and then make up to the full requirement with the artificial food. It will not do any harm to give the two foods in this way. In fact, the small quantity of mother's milk will help baby to digest the artificial food.

If breast milk is unprocurable, artificial feeding must be tried. Whey, which is easily digested, can be useful at first, and the child graded later to the following whey-milk mixture:—

Scalded milk 2 oz. (4 tablespoonfuls),

Scalded whey 2 oz. (4 tablespoonfuls),

Boiled water 1 oz. (2 tablespoonfuls),

Sugar of milk $2\frac{1}{2}$ flat teaspoonfuls not pressed down;

or condensed milk can be tried, and if this is used, a strength of one teaspoonful of condensed milk to twenty-four teaspoonfuls of water can be used to begin with. The condensed milk should always be poured from the container to the spoon in measuring. Very gradually, as the child improves, the strength can be increased to one teaspoonful of condensed milk to eight teaspoonfuls of water.

Nothing but boiled water should be given to the premature baby for the first twelve hours; but after that it must have food. It is impossible to say how much the child should have at a feed. Some of these infants are able to suck the breast, and obtain all they need with three-hourly feeding. Others are quite unable to suck, and at first almost unable to swallow. Such cases must be fed with a pipette or eye-dropper, and if able to take only very little (perhaps only one or two teaspoonfuls) must be fed, at first, perhaps every hour, with one interval, at night, of three hours. With a feeble baby it may take as long as half an hour to give it this small quantity. As soon as the baby can take a larger amount, gradually increase the interval between the feeds (by a quarter of an hour at a time) to three hours, with one five-hour interval at night. Also

substitute a small feeding bottle for the eye-dropper as soon as the child shows signs of sucking. While baby is too feeble to suck the breast, the mother's milk must be expressed, either by hand or the breast pump, every three hours during the day, so that the supply may be kept up. As the child's strength increases, it may be put to the breast, at first for five minutes twice daily, and the feeding finished from the bottle. A rough estimate of the amount of food that a premature baby should take is three ounces for each pound of body weight. Thus, if a baby weighs 3 lb., try to give him 9 oz. of food daily. So if he is fed nine times daily, endeavour to give him an ounce each time. He may take much less at first.

Prevention of Infection.

As a result of being undeveloped and weak, baby is very susceptible to infection. Because he is so tiny he is generally an object of interest and curiosity to neighbours and friends who come to visit him. In his interest this should not be allowed. Even a common cold in an attendant or visitor can easily lead to a fatal pneumonia in a premature baby. For this reason, isolate him as far as possible; have no unnecessary visitors and as few attendants as can be. If mother or nurse develops a cold, she should tie a piece of gauze over her nose and mouth while attending to the child.

Avoidance of Handling.

Handling is very harmful to the feeble premature baby. Until he shows signs of increasing strength, do not remove him from his cot while feeding or oiling him. Handle as little and as gently as possible while changing him. But change of position is necessary—turn him from one side to the other every four hours.

The management of a frail premature baby requires not only much care and trouble, but a high degree of skill. The successful rearing of such an infant is justly a source of pride to mother or nurse.

Chapter III.—Care of the Baby.

BABY'S PROGRESS.

A healthy infant should make definite progress; this shows normal growth and development of mind and body. If babies are properly treated from the start of life, there are few who do not show steady progress.

At two months—Baby knows his mother; will follow moving objects with his eyes.

At four months—He can, with effort, hold up his head.

At five months—Crows and laughs aloud; handles toys.

At sixth month—Weight at birth doubled. Begins to sit up.

Eighth to ninth month—Able to sit up alone.

Ninth to tenth month—Crawls and pulls himself up on his feet.

Eleventh month—Stands with assistance.

Twelfth month—Weight at birth trebled; six teeth cut; says single words.

Twelfth to fifteenth month—Walks alone.

Eighteen months—Soft spot in head closes.

Two years—Puts words into sentences; has sixteen teeth.

WEIGHT.

In the first week after birth a baby loses weight. In the second week he usually gains, so that when a fortnight old he has generally regained his birth weight; but sometimes even a healthy baby does not regain his birth weight until he is three or four weeks old. After that, if baby is not gaining, a doctor's advice must be sought.

From the second week to the fourth month an infant should gain from 4 to 8 oz. per week. From the fourth to the sixth month he should gain $1\frac{1}{4}$ lb. per month, and from the sixth to the twelfth month about 1 lb. per month.

A steady weekly gain is best; if baby makes regular steady gain it does not matter if he is somewhat under average weight. Babies frequently cease to gain weight while teething, if slightly out of health from any cause (a cold, for example), or when the food is being changed.

Never give baby food beyond what he needs for his age and weight, with the idea of further increasing his weight. There are no advantages and many disadvantages in doing this. The child may gain weight rapidly to begin with, but later he will suffer from indigestion, and many ills may follow that. Also, this undue weight makes him a burden for his mother to carry, and in consequence he is taken out less than usual; so again his health suffers. His bones are not sufficiently strong to support his weight, so that he is backward in learning to crawl and walk;

or, if he does walk, he becomes "bandy." And, what is more serious still, if he should become very ill, the baby who is overweight from overfeeding has a poorer chance of recovery than the child of normal weight.

At six months the child should have doubled its birth weight.

At twelve months the child should be about three times its weight at birth.

The following table gives the average weights of children up to the age of twelve months:—

Age.	Weight.
At birth	7½ lb.
1 month	8½ "
2 months	10 "
3 "	11¼ "
4 "	13¼ "
5 "	14½ "
6 "	15½ "
7 "	16½ "
8 "	17½ "
9 "	18½ "
10 "	19½ "
11 "	20½ "
12 "	21 "

The weight of a healthy baby varies according to his build; a big-boned baby weighs more than a small-boned baby. Boys usually weigh a little more than girls.

Table of Average Weights and Heights.

Age.	Sex.	Weight.	Height.
Birth	Male	7.5 lb.	20.6 inches.
	Female	7.1 "	20.5 "
6 months	Male	16 "	25.4 "
	Female	15.5 "	25 "
12 months	Male	20.5 "	29 "
	Female	19.8 "	28.5 "
18 months	Male	22.5 "	30 "
	Female	22 "	29.5 "
2 years	Male	26.5 "	32.5 "
	Female	25.5 "	32.5 "
3 years	Male	31 "	35 "
	Female	30 "	35 "
4 years	Male	35 "	38 "
	Female	34 "	38 "
5 years	Male	41 "	42 "
	Female	40 "	41.5 "
6 years	Male	45 "	44 "
	Female	44 "	43.5 "
7 years	Male	49.5 "	46.5 "
	Female	48 "	46 "
8 years	Male	54.5 "	48.4 "
	Female	53 "	48 "
9 years	Male	60 "	50 "
	Female	57.5 "	49.5 "
10 years	Male	66.5 "	52 "
	Female	64 "	51.5 "
11 years	Male	72.5 "	54 "
	Female	70 "	53.5 "

THE BOWELS.

It is very important that a baby's bowels should act regularly—at least once in twenty-four hours. No effort should be spared to train the infant to this regularity. From the time he is one month old he should be "held out" at the same time each day—preferably just before his bath—and in a very short time he learns what the position means. It is a good rule also to "hold baby out" after every drink, so training the child to clean habits and saving the daily washing.

After birth the bowels may act several times daily, but, as the child gets older, the number of motions usually decreases. Generally young infants have from one to three motions each twenty-four hours. At first the motion is dark and tarry, but after a few days it becomes smooth and yellow, with a faint odour; it should remain like this. If bottle-fed the motions will be rather darker in colour and more offensive than those of a breast-fed infant.

CONSTIPATION IN BABIES.

Breast-fed babies are never really constipated. Their motions are always soft, though they may be passed at long and irregular intervals. This sluggishness of the bowels arises from two causes—(1) giving castor oil to the baby; (2) want of proper training.

The first effect of castor oil is to empty the bowels. Its second effect is to prevent them from acting. The harmful and unnecessary practice of giving castor oil to a newborn baby starts an irregularity which is kept up and increased by repeated doses of castor oil. There results a condition artificially manufactured by the mother or nurse, which she calls "constipation."

Once or twice a day the baby should be allowed to lie without his clothes, or with only a singlet, and exercise his legs and abdominal muscles by freely kicking, for fifteen or twenty minutes in warm weather. This will often induce a motion. If necessary he must be held out over a pan, just touching its rim. It is a good plan to hold out a baby after each feed. He will pass water, thus keeping his napkin dry, and will often pass a motion. If the baby's training has been long neglected, these methods may not suffice. It may then be necessary to pass a soap pencil dipped in oil, or inject a few teaspoonfuls of plain boiled water into the bowel. Gently kneading the abdomen, beginning low on the right side, upwards to the ribs, across, and down on the left side, should help. Medicines should not be necessary.

Bottle-fed babies suffer from the same mismanagement and need the same treatment. With them the condition is more troublesome, for cow's milk is often constipating and causes firmer motions, often

in solid masses, and sometimes in small round lumps like pebbles. The food may need adjusting, and it would be wise to consult a Clinic nurse if possible. See that the baby drinks enough water. He may be taking more milk, especially if this is dried milk, than he should. The substitution of malt-sugar in the form of Mellin's Food, maltogen, or extract of malt, for some or all of the sugar in his food, is often helpful. So is prune juice given as a medicine. If drugs are necessary, fluid magnesia, milk of magnesia, and liquid petroleum oil may be given in teaspoonful doses once or twice a day. No other medicines should be given except on medical advice.

This is very important.—Whatever medicines are given for constipation, much depends on the way the medicine is given. If too large a dose is given, or if it is given every second or third day, or once or twice a week, the irregularity of the bowels is increased, and the constipation may become permanent. The medicine should be given **every day** at the same time, in just sufficient doses to produce its effect and no more. The dose must be determined by trial. Once a daily regular action has been established, the dose should be slowly made less, and after a time may be left off. Used rightly the medicine will help to cure constipation; used wrongly the same medicine will make it worse.

The same general rules apply to older children. With proper management and proper diet, with a correct amount of vegetables and fruit constipation should be very uncommon. Prune pulp is helpful. So is a tablespoonful or two of bran for breakfast given with porridge or with milk every morning. This is good for mothers also.

WEANING.

The best time to wean a baby is between the ninth and twelfth months. Up to nine months its mother's milk should be its sole food, so that, unless it is absolutely unavoidable, baby should never be weaned before that time. The younger the infant is, the more risks attend the process.

Avoid Weaning during very Hot Weather.—Baby is more likely to be upset if weaned during hot summer weather, especially during the early summer, November and December being usually the most dangerous months. So, if baby reaches nine months in November or December, it is better to postpone weaning until February or March, or, if he reaches that age in January or February, until April or May. But he may be given a small piece of baked bread before one of his breast feeds, and later before two or three feeds. He should also be taught how to drink water out of a cup.

Do not Wean Suddenly.—If put suddenly on artificial food baby may be very badly upset, so make the change very gradual. Commence by giving one artificial feed each day, then keep on with the breast

for the remainder of the day. Continue this for several days, or even a week. Then give two artificial feeds daily and the breast for the remainder of the day as before. Again continue this for several days, and so progress until baby is entirely weaned.

GUIDE TO THE ARTIFICIAL FEEDING OF BABIES AFTER NINE MONTHS.

Important Points to Remember.—Remember that at this stage food tastes and habits are formed which may last a lifetime.

1. Teach baby to drink out of a cup at any time between nine and twelve months (if this has not already been done), and discontinue bottle feeding. Give the drinks from a cup, first at one feed (say, the 10 a.m.), then at two feeds in the day, and so on—thus discontinuing bottle feeding gradually.

2. Keep absolutely to regular meal times. Give nothing whatever but water and fruit-juice between meals.

3. As baby takes more solid and varied food he needs less milk, but do not let him go without a drink at each meal. A healthy baby after the first year can usually take pure cow's milk. Up to eighteen months milk in some form should be his principal food.

4. Introduce all new foods one at a time and a little at a time. Never make sudden changes. It is better to go too slowly than too quickly.

5. Teach baby to eat each new food that is good for him. Do not let him start the bad habit of refusing food because he does not like it. If persevered with, babies like almost anything that is good for them. They will not want the things which are bad for them, if they have never tasted them. Do not let them get the taste for cake or sweets.

6. Active exercise for teeth, jaws, and salivary glands is absolutely necessary. Baby must be taught to chew, not to bolt his food, and, as time goes on, to take more and more of his food in hard form. Remember that hard, crisp baked bread, with butter or dripping and a drink of milk, is just as nourishing and better for teeth and digestion than a basin of bread and milk, and crisp hard oatecake is just as good as soft porridge.

7. Do not add too much sugar to baby's food. It is bad for the teeth and the digestion.

8. Cook all foods thoroughly and serve appetisingly. Add a little salt in cooking.

9. **Children should not be continually urged to eat if they are disinclined to do so.** Under no ordinary circumstances should a child be forced to eat.

10. If there is any important article of a simple diet, such as milk, meat, cereals, or vegetables, which a child habitually refuses, this should always be given first at the meal, and all other food withheld until this is eaten.

11. Always give the most substantial meal in the middle of the day. Never give a young child a meal of meat and vegetables before he goes to bed at night.

From 9 to 18 Months—

Give about one pint of milk each day.

Between 9 and 12 Months—

Teach baby to chew his food; give dry crusts, or oven-dried bread, about ten minutes before meals, not between feeds; give water and fruit-juice only between feeds.

9 to 10 Months—

10 a.m. Feed.—Give jelly of barley, oatmeal, or wheatmeal as described in Chapter VIII. Begin with one tablespoonful and increase slowly to four, with two to six teaspoonfuls of milk on it, not mixed into it. Teach baby the "feel" of solid food. Add no sugar, but just a pinch of salt in cooking. Follow this spoon-feed by the usual 8-oz. drink of milk mixture. Later, when more cereal is taken, give only 6 or 7 oz. of the milk.

10 to 11 Months—

Continue cereal jelly and give at two meals, say, 10 a.m. and 6 p.m., up to a total of 7 oz. daily at 11 months.

Give crust or oven-dried bread at 2 p.m., followed by usual 8 oz. of milk mixture.

11 to 12 Months—

Continue cereal jelly, increasing amount up to 10 oz. daily. Give more dry crusts and baked bread, also increase fruit-juice.

12 to 15 Months—

Solid, Tough, Dry, or Hard Foods.—Crusts and baked bread, and stale bread—all to be taken with a little butter or dripping.

Cereal jellies to be continued. Towards the end of this period, gradually mix some unstrained porridge into the strained porridge (jelly); as times goes on, less and less need be strained.

Milk puddings, made with well-cooked ground rice, semolina, &c.

Egg.—Half a yolk may be given two or three times a week—a little white being added gradually.

Broths.—Vegetable milk-broth, chicken-broth, or mutton-broth. All to be made with pearl barley or rice, and to be well strained.

Vegetables.—Floury potato cooked in skin, spinach, cauliflower, carrot, &c., well cooked, rubbed through a fine sieve, and served warm with a little butter, or meat gravy without fat.

Fruits.—Pulp of baked apple or pulp of stewed prunes. Begin with only a teaspoonful, and increase very gradually to one or two tablespoonfuls; a little milk may be given with this. Gradually and cautiously some raw ripe apple may be given, under careful supervision. If the raw apple is not well taken, continue giving the juice of some raw fruit or vegetable daily.

N.B.—Give the baby a dry evening meal sometimes—that is, without any mushy food, but with milk to drink.

15 to 18 Months—

Other Foods.—On same lines as previous period, but give more of the solid, dry, tough, or hard foods, including wholemeal bread, milk puddings made with rice, sago, tapioca, &c.; also, give a piece of raw ripe apple at the end of each meal. Continue training the baby to chew thoroughly, and avoid giving much soft mushy food.

Egg.—Coddled or lightly boiled, not more often than three times a week; or a little custard may be given with baked apple or stewed prune pulp.

Light fish, steamed or boiled.

Chicken, steamed or boiled, and either well minced or preferably chewed off the bone. Only a teaspoonful of either chicken or fish should be allowed at first; and limit to, say, a level dessert-spoonful up to two years of age.

18 Months to 2 Years, and Onwards—

Further increase the use of hard and dry foods, including oven-dried wholemeal bread, oatcake, &c.

Give about one pint of milk a day; also supply enough water. Increase the use of vegetables, adding to the previous list young green peas and beans, vegetable marrow, onions, young greens, young tender corn on cob, &c.

Fruit.—Give some raw fruit daily, if possible, but not too much. Apples, oranges, grapes, and ripe peaches are safest and best, but be careful to remove all pips, skin, and core. Be specially careful with tomatoes and bananas. Tomatoes must have all the seeds and skin removed. Bananas must be ripe but not over-ripe; they must be thoroughly mashed with a fork, and not too much given. Do not give raw vegetables to children under two years. Nuts should not be given to children under three years.

NOTE.—Recipes for barley, rice, and oat jelly will be found in Chapter VIII. among Simple Recipes, also for prune pulp and custard.

Suggested Diet for Children from 18 Months to 2 Years.

6 a.m. On waking.—A drink of milk.

BREAKFAST—7.30 TO 8.30 A.M.

Well-cooked porridge, or groats, or granose biscuit, with milk; *or* bread and milk. Followed by cold crisp toast with butter or dripping; *or* baked bread with butter and a little jam or honey. Drink of milk.

DINNER—12 TO 1 P.M.

Mutton or vegetable broth, with breadcrumbs.

Or Gravy with breadcrumbs.

Or Mashed potato or pumpkin with red meat gravy.

Or Coddled egg and breadcrumbs (not more often than twice weekly).

Or a little steamed fish with white sauce, and potato.

Or Minced chicken with potato.

Followed by about 3 tablespoonsful of well-cooked milk pudding (rice, sago, macaroni, &c.).

Or Boiled or baked custard, with baked apple-pulp, or stewed prunes put through a sieve.

Or Baked apple or stewed prunes, with junket. Drink of water, or weak lemon syrup.

TEA—5 TO 6 P.M.

A little bread and milk, junket, or well-cooked milk pudding.

Crisp toast, or baked bread, or home made rusks, with butter, and a little honey, treacle, or jam.

Drink of milk.

A small piece of raw apple may be given at the end of each meal, but you must see that it is well chewed before it is swallowed.

SLEEP.

A newborn baby should sleep nine-tenths of its time—that is, almost all the time that is not spent in feeding, bathing, &c. From birth he must be wakened regularly during the day for his food, and permitted to sleep all night. If he wakes during the night, change wet or soiled napkins, and change his position. If the weather is hot, give him a little boiled water, but never feed him between 10 p.m. and his 5 or 6 a.m. feed.

As the child gets older he sleeps less; but up to the time he is twelve months old he should have at least two hours' sleep in the morning and also a sleep in the afternoon. Absolute regularity is necessary. The want of sufficient sleep may cause nervous disease in later life.

Why Babies and Young Children do not Sleep.

All babies and young children need much sleep, but some sleep more than others. Some allowance must be made for inborn differences. But so long as they are healthy and properly managed children will take all the sleep they need. Bad management may lead to a baby sleeping too long in the daytime, so missing some of his feeds, and becoming wakeful and hungry in the night. If a baby is really unable to sleep from hunger, it is better to give him a small feed in the night than to let him cry until exhausted. But in this case the food taken during the day has been insufficient, and the quantities must be revised. Night-feeding easily becomes a bad habit.

If your child is sleeping badly, there is some reason for it. Consider carefully whether he is not suffering from one of the common causes of bad sleeping.

1. By far the most common cause of bad nights is over-feeding, or feeding with food the child cannot digest, more especially if this food is given in the afternoon or evening. It may be necessary to lessen the whole quantity of food taken, or with older children to change the hour of the child's principal meal from the afternoon to midday, and to give only a very light meal at the end of the day. Feeding between meals with bread and butter, biscuits, &c., should always be avoided. Some children wake in the night screaming and frightened. These attacks are called "night-terrors," and are almost always caused by improper feeding. When they occur in older people they are called nightmares.

2. Pain may cause want of sleep. This includes stomach-aches caused by bad feeding. Another common pain is earache. You may suspect this if the child has "a cold" with running from the nose or a cough. Some warm glycerine dropped into the ear and a hot flannel to the side of the head may give relief. If the pain is severe or persistent you must seek medical advice.

3. Some children cannot sleep on account of obstruction to their breathing. They sleep with their mouths open, breathe heavily, sometimes snore, often toss and roll about the bed. This is a common condition caused by adenoids. Do not delay in taking these children to the doctor, for unless relieved they will grow steadily worse.

4. Another cause of want of sleep is over-excitement. It is very effectual in children of nervous temperament. You may often see these children start and twitch even when they are asleep. Late parties, picture shows, or other exciting entertainments in the evening are bad for all children and especially for these children. Most babies are "jumpy" and easily startled. The father who comes home late and enjoys a game with the little one before it goes to bed, may spoil its night's rest.

5. Occasionally restlessness at night is caused by thread-worms. You may learn about this on another page.

BABY'S BATH.

A baby must have a daily bath, which should be given at the same time each day. Always arrange to give it just before a feed is due; never immediately after a feed. At least an hour should elapse after a meal, before a bath is given.

A proper baby bath is required; a bedroom basin is not sufficiently large except for the first few days.

See that everything is in readiness before undressing baby. Choose a place sheltered from draughts; in winter a warm room is needed. Get ready a complete outfit of clean clothes so placed that the articles lie one on top of the other, in the order in which they will be required when dressing baby. Get ready also two washers, a cake of good baby soap, two Turkish towels, a flannel apron for the mother to wear, and the baby bath. Powder is not a necessity if baby is very carefully dried, but it can be used if liked.

While bathing baby the mother either sits on a low chair, with the bath standing on another low chair in front of her; or else she places the bath on a table by which she stands.

Put the cold water into the bath first. Never put the hot in first, as serious accident may happen if a mistake is made. Then add to the cold water sufficient hot to make the bath blood heat. If no thermometer is available, this is judged by placing the bare elbow in the water, and when it feels comfortably warm to the elbow, it is the right heat.

Hold baby out; then undress him quickly, and wrap him in a towel. Wash his face carefully and gently, and dry it carefully. Keep one washer specially for his face. Next soap, wash, and dry his head. With ordinary care, there is no risk of damaging the soft spot on the top of the head. If the mother is sitting down to give the bath, baby is lying on her lap while his head and face are being washed; if she is standing, he is lying on a folded blanket on the table. Now loosen the towel from around baby, and leave him lying on it while, with the second washer, you quickly soap and wash him all over. Then lift him into the bath. The mother's left arm and hand should be behind him to support his head and back, while with the right hand the front of his body is well rinsed with the washer. Next turn him face downwards, still supporting him with the left arm, and again rinse thoroughly. Lift him out, wrap him into a towel and dry quickly, paying special attention to the creases and the backs of the ears. If left damp they are apt to become sore. Dress him quickly; do not loiter over the bath. Do not clean out his mouth; it does not require it.

The very young baby usually cries violently while being bathed, but after a few weeks he learns to enjoy it. Long after he enjoys his bath he dislikes being dressed, and cries vigorously during the process. In the evening, undress and sponge him, and put on his nightdress. In summer weather a bath can be given instead of the sponging.

A feeble baby should not be bathed, but should be sponged daily. Uncover only a small portion at a time (for example, one leg, or one arm), wash, dry, and cover again quickly. Even if baby is delicate, the whole of his body requires washing daily.

BABY'S BED.

Baby must be trained from birth to sleep by himself, for the following reasons:—

By sleeping with his mother he runs the risk of being overlain and suffocated.

Lying close to the mother, he is probably breathing his mother's used-up breath, instead of the pure air which he needs.

From lying close to the mother, baby becomes overheated, and frequently develops an irritating rash.

The child is disturbed by the mother's movements, and so sleeps less soundly. And when wakened he develops the bad habit of demanding to be fed during the night.

If accustomed to sleep with his mother at night he sleeps less soundly in the daytime, because he then misses his mother.

Therefore, see that baby has his own cot, which should be placed, not close against the mother's bed, where he will breathe impure air, but on the opposite side of the room, with a free current of pure air passing between mother's bed and baby's cot.

Chapter IV.—Your Child's Teeth.

The first or temporary teeth are formed long before birth. Every baby is born with a mouth full of teeth, though they are under the gums and cannot be seen. Somewhere about the seventh month—the exact age varies much even in healthy babies—the first tooth appears, usually a lower middle incisor (or front tooth). Within the next two months all the incisor teeth may be cut. About the beginning of the second year the first milk molars (or back teeth) appear. At about eighteen months the canine or eye teeth emerge between these and the incisors; about the end of the second year the second milk molars. This completes the first set of teeth, twenty in all.

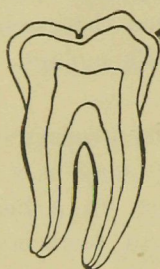
Teething is not a Disease.—It is a perfectly healthy process which often gives rise to no trouble at all. At the worst there may be a little fretfulness and dribbling, when the gums are swollen, in a healthy baby. When a baby is sick from any cause the uncut teeth appear to ache, and the mother is apt to mistake this aching for the cause of the illness. As all babies are “teething” from six months to two years of age, this is a very convenient excuse for all the troubles caused by want of knowledge and care. Teething bands are useless; teething powders are both useless and dangerous.

At birth the crowns of the first permanent molars are already beginning to form; those of all the other **permanent teeth** are formed inside the gums during the first three years of life, though they do not appear until much later. The first permanent molars appear at about six years behind the milk molars. They are often mistaken for temporary teeth, and allowed to decay early—a very serious error, for they are intended to last a lifetime. Within the next two years the roots of the temporary incisors are absorbed and they fall out, to be replaced by permanent teeth. Within another two years the same happens to the milk molars, later still to the canine or eye teeth, and the second permanent molars appear. The last or wisdom teeth, which complete the permanent set of thirty-two, come much later.

The Formation of Good Teeth.

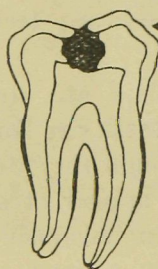
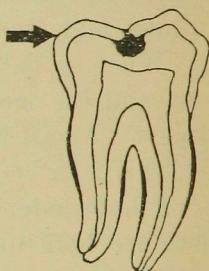
No care after birth will affect the formation of the first set of teeth. To have good teeth the baby must be born of a healthy mother, one who has taken plenty of fresh air and exercise, who has chosen her food wisely (including fresh milk, eggs, uncooked fruit, and vegetables), but has not eaten overmuch, who has taken no alcohol, who has not been troubled by indigestion (perhaps caused by her own bad teeth), constipation, or kidney disease, and who has thus been able to supply the good blood out of which good teeth are made.

How Decay Spreads in a Tooth



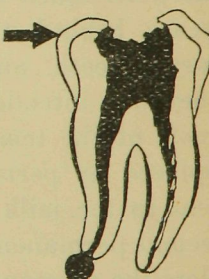
← THE DECAY BEGINS IN A LITTLE PIT OR CRACK IN THE HARD OUTER COVERING, WHERE FOOD & GERMS HAVE COLLECTED

THE DECAY REACHES THE SOFTER INNER SUBSTANCE OF THE TOOTH & BEGINS TO UNDERMINE THE OUTER SHELL



← THE OUTER SHELL BREAKS AWAY, THE DECAY SPREADS TOWARDS THE PULP OF THE TOOTH, POISON IS COMING INTO THE MOUTH THROUGH THE OPEN SORE

THE DECAY HAS REACHED THE PULP OR NERVE & HAS SPREAD DOWNWARDS; AN ABSCESS IS FORMING AT THE ROOT OF THE TOOTH AND POISON IS BEING ABSORBED INTO THE BLOOD

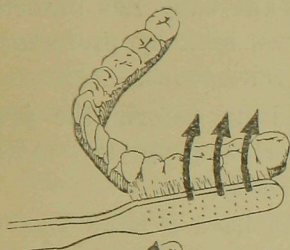


Get the little holes in your teeth stopped before they go too far !

**They will never stop of their own accord !
Don't wait till the tooth hurts !**

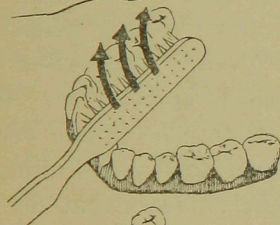
TAKE CARE OF YOUR TEETH & YOUR TEETH WILL TAKE CARE OF YOU.

How to clean the Teeth

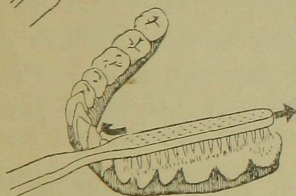


Clean out the spaces
between the teeth

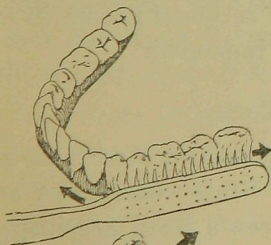
← First outside



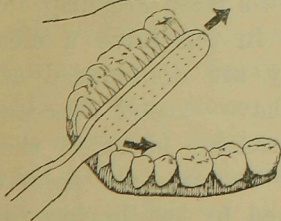
← Then inside



← Then brush along
the tops of the teeth



← Then clean the out-
sides of the teeth



← Then clean the insides

Do the same to the other Jaw

**THEN WASH YOUR MOUTH OUT WELL
AND YOUR TEETH WILL BE CLEAN**

**Take care of your teeth—and
your teeth will take care of you!**

As the permanent teeth are formed in the first three years of life their good development depends on the care that is taken of those years. For their perfection and durability the baby should be suckled with human milk, the only substance which contains all the materials for forming good teeth in best proportions. If the baby has unfortunately to be bottle-fed he should have good cow's milk by preference, and a small quantity of cod-liver oil may be advantageous.

He should have no "dummy," which tends to deform the jaws and crowd the teeth so that they cannot develop properly. After weaning he should be carefully fed with right foods.

When the baby is six months old he should have a bare bone to bite. When he is nine months old he should have a tiny crust or finger of bread baked hard and crisp in the oven. Thereafter he should be given baked bread instead of soft bread, and butter. His crusts should be hard and crisp but not tough. Before he is two years of age baby should have learnt to bite other hard foods, including a piece of raw apple, which is a good tooth cleanser. Jaws that do no work and have no exercise will not grow strong teeth. Mothers are destroying teeth by feeding babies entirely on pap and mush. Crisp oatcake should sometimes be given instead of soft porridge, or prepared bran may be added to the porridge.

Any serious illness or prolonged failure of nutrition during the first three years, although it may be completely recovered from in every other respect, may leave the permanent teeth imperfect.

The Preservation of Good Teeth.

Children's teeth are more precious than pearls; we wish as much care were taken of them. School age in this State commences at six years, and soon after entering school the children's teeth are inspected by the school dentists. Not more than **one in ten** have a clean mouth. Of their fair white infant teeth many are discoloured and broken, some are septic and offensive, some have caused abscesses. Many of these children have suffered from toothache, many of them have been unable to masticate properly and have acquired the habit of bolting soft food, some have been partly poisoned by swallowing foul secretions. Worse than all, owing to the loss of temporary teeth the jaws have not grown properly, the permanent teeth are crowded and ill-developed. Often the six-year-old molars begin to decay soon after they have erupted. It is a dismal picture. No wonder that many children grow up undersized, ill-developed, and weakly, poorly equipped to meet the strains and stresses of after life.

Let us try to understand the reasons for this. Some children, as we have already explained, have weakly constructed teeth to begin with, but most of the trouble is due to sheer destruction, caused by want of knowledge and proper care. Nature has capped every tooth

with one of the hardest substances known, called enamel. It is formed by living cells beneath the gums, but once formed it is a dead tissue, and once destroyed can never be replaced. Nature has therefore made it very hard and resistant, capable of crushing and grinding and lasting. It has one weakness: being formed of lime salts it is dissolved slowly but surely by acids. To guard it from this danger nature keeps it constantly bathed by an alkaline fluid, the saliva. So cunningly has nature contrived the mechanism of the salivary glands, that they are stimulated to action by all pleasant acid flavours, such as those of fruit juices, which flood the mouth with alkaline saliva. But tasteless, insipid, and alkaline foods do not stimulate the salivary glands but discourage them. Nature's safeguards were almost perfect, until mankind commenced to feed on large quantities of starchy foods and sugar, against which her defensive mechanism was insufficient. These destroy the enamel by forming a paste lodging in the small cavities of the teeth, and the spaces between the teeth, or a glutinous deposit on the teeth. These pastes and sticky substances cannot be penetrated by the saliva, and slowly ferment as they adhere, forming acids. Each atom of acid, as it is formed, unites with an atom of lime from the enamel. As this goes on day after day, month after month, year after year, the enamel becomes penetrated at its weakest spots. Once it is penetrated, the interior of the tooth begins to decay, the living pulp becomes inflamed, and the tooth is lost. In the early stages the dentist can save the tooth by skilful treatment. In the later stages the tooth should be extracted; it is then a source of weakness and poison.

Prevention is better than cure. Preserve your children's teeth by feeding them in such a way as to assist nature's defensive mechanism and not frustrate it. Nature has some difficulty in dealing with bread and butter; a little acid jam will assist her. Bread and butter **between meals** will in time destroy the teeth, sweet cake will do so more quickly, biscuits made of finely ground flour (so much advertised and so much used) are even worse. Every meal should contain some acid substance such as stewed fruit, even canned fruit will do, but without too much sugar. Or a little fresh fruit may be given at the end of the meal, and this is best of all. Apples and oranges are the safest and best, but any acid fruit may be given with care. Understand that we do not say that children should be given **too much** fruit, **but a little fruit at the end of the meal**. Sugar-cane contains a sweet acid juice which is good for the teeth, and the exercise which it gives to the jaws is beneficial. It may be given instead of fruit.

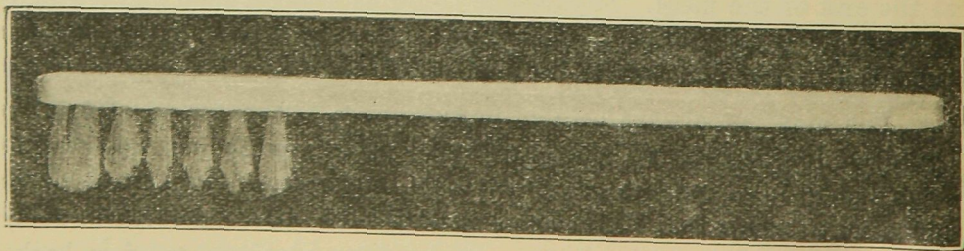
You may not always be able to give fruit. Then give acid drinks. Children like them, and they are inexpensive. Lemonade made with weak lemon-juice and water with not too much sugar, or bottled lime-juice, or a syrup you can make yourself with citric or tartaric acid, are all good. Lemon-trees are very hardy, and there are few back-

yards in the coastal districts in which they will not grow. In some districts, such as Townsville, where lemons may be expensive, the Indian Tamarind grows freely, and from this a delicious and wholesome acid drink is easily made. (See Chapter VIII.) Tea lessens the secretion of saliva, and for this and other reasons should not be given to children.

We give our children too much sugar. In excess, sugar combines with the mucus of the mouth to form a sticky coating on the teeth impenetrable to the saliva. Sweetmeats and lollies are harmful. None of them are good, but the old-fashioned acid drops and peppermint bullseyes were not so bad as are chocolates and soft sweets. Children like sweets, but they like fruit better, and fruit in moderation is good for them. Above all be careful what you give the child in the evenings. The **surest** way to destroy his teeth quickly is to give him a chocolate or a biscuit when he goes to bed; all night it will be corroding his teeth undisturbed.

When your child gets old enough let him see you clean your teeth **the last thing before he goes to bed**. He will want to imitate. Let him use a small toothbrush like that in the picture. The mouth should be wide open, not shut, and the teeth should be brushed gently—inside, outside, and on the top—brushed as you would brush a dress, not scrubbed as you would scrub a floor. Do not use any tooth-paste or tooth powder. Dip the brush in the fruit-acid tooth-wash described in Chapter VIII., and teach him to rinse out his mouth with this afterwards. He should not swallow it, but if he swallows a little it will not harm him. The toothbrush should be carefully rinsed and kept dry.

Watch your children's teeth carefully, and if there is anything wrong take them to a dentist. Indeed, it would be a good thing if all children had their teeth examined by a dentist once a year, whether they appear sound or not. All teeth showing the first signs of decay should be stopped at once before they get worse. This will save much trouble and expense afterwards, for if the temporary teeth are neglected the permanent teeth may be ruined. The most important of all the teeth to save are the six-year molars, which come through behind the temporary teeth, sometimes without the mothers noticing them. They are mistaken for temporary teeth, allowed to decay, and the whole permanent set is spoilt. Dentists consider them "the key of the arch."



Full-size photograph of a small toothbrush—the brush not more than $1\frac{1}{4}$ inch long, the bristles of unequal length, forming a serrated edge.

Chapter V.—The Feeding of Children from Two to Five Years of Age.

At these ages it is not usually necessary to measure the quantities of food taken. So long as the food is plain and wholesome, the quantity may be left to the appetite, which varies much in different children. But if the child is fond of any particular food—for instance, fruit, or butter, or jam, or potato, or meat—it may be necessary to limit the quantity of that. The foods that we do not like very much are not likely to do us any harm.

Some rules should be observed. The meals should be limited to three. No solid food should be given between meals. Giving children bread and butter, cake, and biscuits between their meals spoils their meals; it often causes loss of weight, and it is sure to cause decay of the teeth. Sometimes it is advisable to give a drink of milk and fruit between meals, but usually milk is given with meals.

Children should never be forced, bullied, begged, or bribed to take their food. This is a sure road to trouble. If your child refuses a meal, which is not distasteful, do not make a fuss. He may be “bilious” or not hungry for good reasons. If in good health, he will have a good appetite for the next meal. The child who is implored to eat by an over-anxious mother becomes more and more difficult to feed. He gets thin and his health suffers. In extreme cases it is necessary to separate him from his mother, when he rapidly recovers.

Some foods and drinks should not be given to young children—soft new bread, heavy rich puddings such as plum puddings, raw cucumber, celery and radishes, nuts, cheese unless grated, biscuits made of finely ground flour such as arrowroot biscuits, sweetmeats and lollies of all kinds, pickles, sauces, tea, and coffee.

If children have pennies to spend, let them buy wholesome fruit instead of tooth-destroying sweetmeats.

Give fresh foods as much as possible. Dried and canned foods and all the things you buy in tins should be given only as occasional substitutes. Without a plentiful supply of vitamins no children can thrive. Stews, soups, macaroni, &c., given to children must not contain pepper and spices.

Of all foods milk is the most important. For the amount of nourishment it contains milk is the cheapest of foods. Every child should have every day, if possible, one pint. This may be given partly with porridge, partly as a drink, partly in milk puddings or custards. Some children prefer to drink the milk. Those who do not like it this

way may have it flavoured with cocoa or postum, or take it as junket. In some western districts where fresh milk may be unprocurable, dried, skimmed, or creamless milk (of which there are several good brands) may be substituted. It is not a food for infants, but for older children it makes good milk puddings. The absence of cream may be corrected by the addition of some butter. Milk puddings should be milky, not stiff and stodgy; usually children like them best made without eggs. Custard made of milk and eggs is a valuable food..

Fruit is a necessary food, not a luxury, and should be taken with meals, and not, as a rule, between meals. When other fruits are dear, tomatoes may be cheap, and are just as good. Each meal should end with fresh fruit, or with stewed fruit and milk pudding, junket, or custard. Or an acid drink made with lemon or orange juice or with tamarinds, or failing these with tartaric acid, is a pleasant change, and helps to preserve the teeth. Be very careful not to give unripe or over-ripe fruit; do not give too much, and if you give raw apples, be very sure that they are thoroughly chewed. Bananas for young children should be carefully mashed. Many of our children are fruit-starved; consequently when they get a chance they gorge themselves with fruit and get sick.

Vegetables are a most important part of children's diet. Root vegetables are particularly rich in mineral salts and vitamins. Green vegetables also contain vitamins, and valuable amounts of lime and iron. We frequently meet children who do not like vegetables. This is often because their mothers do not know how best to cook them. Choose vegetables young and tender. Buy them fresh, not stale. Those you grow yourself are best.

Roots should be only scraped or carefully brushed, as their mineral contents are most rich under the skin. Potatoes cooked in their jackets contain much more mineral salts than those boiled in the ordinary way.

Leafy vegetables such as cabbage, lettuce, spinach, white beet, and turnip tops are spoilt by long cooking and by using soda. Often most of their valuable salts are thrown away in the water. Therefore, little water should be used, and made to evaporate, so nothing is thrown away. Adding butter makes them nicer and more nourishing.

Peas and beans should be cooked gently at first, or they burst. They are valuable sources of vitamin B, but this is destroyed by cooking with soda.

In western districts, where fresh fruit and vegetables may be unprocurable for long periods, sprouted peas and beans are a most valuable source of vitamin C. Keep them covered in a shallow dish of water (not too cold) till they are an inch long. Then cook very gently and not long. (See recipe in Chapter IX.)

Young children should have their dinner or principal meal in the middle of the day. If given in the evening it spoils their night's rest, and may cause night terrors.

Breakfast.

Oatmeal or wheatmeal porridge, or boiled rice, or any kind of breakfast food. Add to these a tablespoonful of prepared bran, a little sugar or golden syrup, and plenty of milk.

One egg boiled, poached, or scrambled, baked bread or crisp toast, and butter. Sometimes as a change give a slice of cold boiled bacon or stewed slice of bacon. The bacon should be fat and should not be fried. Bacon and butter should not be given together. Or some fresh fish when procurable.

Baked bread or crisp toast and butter with marmite or jam or honey. Or baked bread or crisp toast and dripping.

Milk to drink or cocoa and milk (not too sweet), or postum and milk.

A quarter or half an apple or orange.

Dinner.

This should be varied; we give suggestions for one week. Acid drinks may be given with each, and should certainly be given if the meal contains no fruit. If potatoes are provided, bread is unnecessary children under three should be given meat and liver cautiously and in small quantity.

1. Roast beef (underdone) or mutton or grilled steak or chops cut up fine. Potatoes (sweet potatoes are just as wholesome, and many children like them better). Vegetables such as marrows, squashes, pumpkins, stringed beans, cauliflower, well-boiled carrots, and turnips or parsnips, boiled onions, &c. Peas and beans should be well cooked and in small quantities. Milk pudding (without eggs) with baked apples or stewed fruit.
2. Fresh fish boiled, steamed, or fried. Potatoes and vegetables. Canned peaches or apricots (fresh ones when you can get them) with custard.
3. Liver (the most valuable of all meat foods, sometimes called lamb's fry), with or without bacon. Potatoes and vegetables. Junket and stewed prunes. Lemon or tamarind drink or fresh fruit.
4. Vegetable soup or broth made with carrots onions, &c. Macaroni or rice or cauliflower with grated cheese. Lettuce with tomato or beetroot salad. Fresh fruit.

5. Tripe stewed in milk. Potatoes and vegetables. A plain stewed pudding with stewed fruit or a small helping of jam. Lemon or tamarind drink.
6. Stewed mutton or chicken or rabbit. Potatoes and vegetables. Bread and butter pudding, with stewed fruit or acid drink.
7. Omelette, or boiled, poached, or scrambled eggs. Lettuce with tomato or beetroot salad. Wholemeal bread or brown bread and butter. Milk pudding without eggs. Lemon or tamarind drink or fresh fruit.

This would be a good dietary for one week, but mothers should vary it, keeping to the main principles. Meat should not be given every time, but children should be allowed to develop a taste for other wholesome and important foods, such as cheese, liver, tripe, and fish.

Tea.

A large cupful (7 to 10 oz.) of milk, or hot cocoa or postum made with nearly all milk.

Baked bread with butter and acid jam or marmite, sponge cake, rock cake, or oatcake, rusks, or granose biscuit.

Some stewed fruit with junket or milk pudding. Or half or one orange or other fresh fruit in moderation.

Sometimes tomatoes cooked with rice or macaroni; canned tomatoes may be used if you cannot get fresh ones.

THE FOOD OF SCHOOL CHILDREN.

After five years of age the child begins to take the same food as the grown-up members of the family. This should not be very different from the diet we have recommended for the child under five. If the mother does not know the difference between wholesome and unwholesome food, as sometimes happens, so much the worse for the child. He probably has his dinner about six o'clock. It must be remembered that the growing child needs a liberal allowance of proteids (body-building foods); especially he needs more milk. If he drinks tea, it should be weak, with plenty of milk; cocoa and milk would be better; he should also have plenty of milk puddings, custard, milk with his porridge, and so on.

Probably he takes his lunch with him to school. This may consist of a few sandwiches, perhaps some oatcake, shortbread, or rock cake, and should always contain some fruit, but should not be mostly fruit. The sandwiches give an opportunity for some pleasing and wholesome variety. The bread should be stale, cut thin, and lightly buttered; wholemeal or brown bread are best. Meat or ham sandwiches are not

recommended, though they may be given occasionally. The following are better :—

1. Cheese sandwiches, either thin slices of cheese or, better, some soft cheese that can be spread on the butter.
2. Marmite sandwiches with or without lettuce leaves.
3. Thin slices of hardboiled eggs with or without lettuce.
4. Fruit sandwiches made with sliced tomatoes, bananas, or pineapples. If fruit sandwiches are not given, add an orange, apple, pear, or banana to the lunch, or a short stick of sugar-cane.

On returning from school the child should have a glass of milk or a cup of hot milk, perhaps also some fruit.

ECONOMY.

Remember that milk is the cheapest as well as the best of all foods. If you live out West and cannot get fresh milk, make your milk puddings out of dried skimmed milk, adding a little butter.

The best vegetables and the cheapest are those you grow yourselves. If every backyard grew a lemon tree and some vegetables, we should have more healthy children.

Fruit is often expensive, but by keeping your eyes open you may often buy it cheaply when in season. Do not forget that tomatoes are wholesome fruit and sometimes plentiful. But do not buy over-ripe fruit because it is cheap; or you will find it is really expensive.

Remember that tamarinds, in districts where they grow, are good and cheap substitutes for lemons.

In remote western districts fruit and vegetables may be unprocurable for many months. Onions will keep a long time and are very wholesome raw or boiled. Canned tomatoes contain some vitamin though not so much as fresh, and so do some other canned fruits. Perhaps the best substitute for fresh vegetables are *sprouted* peas and beans prepared according to our directions. If the peas and beans are dead they will not sprout, but dried peas and beans remain alive for one or two years. Another substitute is a soup-plate in which a piece of flannel sprinkled with mustard, cress, or radish seed is kept moist. When the tiny plants are an inch or two high you cut them off with scissors and eat them with bread and butter.

Chapter VI.—Baby Clothing.

IMPORTANT POINTS TO REMEMBER.

1. The first and main object should be comfort for the baby.
2. The patterns should be simple, so that the garments are easy to put on and take off. They should hang from the shoulders, and have no tight bands to hinder development.
3. Materials should be porous, non-irritating, and light.
4. The clothing should be loose; and warm, or cool, as the weather and the child's condition may demand. Under all conditions, too heavy or too many garments must be avoided.
5. They should be made in such a way as to ensure easy washing, drying, and ironing. Avoid unnecessary double thicknesses of material, which are difficult to air well.
6. No hard-and-fast rule can be made as to the number of garments required by an individual child. Very young, small, or feeble babies require warmer clothing than those who are larger and stronger. Coldness of hands and feet, and blueness of lips, would generally indicate need for more clothing. Over-clothing, which should be guarded against in hot weather, may cause restlessness, fretfulness, and increased perspiration.

BABY'S OUTFIT.

Mothers are sometimes in doubt as to what number of each of the necessary garments must be provided for the expected baby.

The accompanying list gives the fewest number of each with which it would be wise to try to manage. An additional number (especially of napkins) would be an advantage:—

3 binders	3 dresses
4 vests	3 nightgowns
2½ dozen napkins	4 pairs bootees
3 petticoats	1 shawl

DIRECTIONS FOR BABY PATTERNS.

We desire to make acknowledgment for some of these directions and diagrams to the Royal New Zealand Society for the Health of Women and Children.

The Binder.

The binder is simply a bandage for keeping the dressing in place until the naval is healed. After that, it should be discarded. It is

not required for warmth. Some mothers think that its use should be continued after that time, to support and strengthen baby's back. This is a mistake. Baby's movements should be as free as possible, so that by exercise he can strengthen his muscles. A firmly applied binder tends to limit his movements. One that is loosely applied wriggles up under his arms, where it must be very uncomfortable, and is quite useless as a support. Until the navel is healed, the binder is a necessity, to keep the dressing in place. After that, give baby all possible freedom, and the muscles of his back will be stronger than they would be if the use of the binder were prolonged.

The binder should be made of fine flannel, five inches wide. Its length should be the width of the flannel—that is, 27 to 30 inches. It should not be hemmed, as even a flat hem can be irritating to baby's delicate skin. If the mother dislikes the raw edges, a blanket stitching can be used as a finish.

The old-fashioned stiff cotton binder should, of course, never be used. Not only must it be most uncomfortable for the baby, but by pressing on delicate structures it can do permanent harm.

Napkins.

These should be made from either towelling or white flannelette of good quality; the latter is better. They should be 27 to 30 inches square.

When taking baby out, knitted pilchers should be used over the napkin, not rubber drawers. The latter are very heating to baby's delicate skin, and are both uncomfortable and unhealthy.

Baby's Vest.

The woven silk-and-wool vests which can be bought at any draper's are very suitable for the newborn baby. The mixture of silk and wool is less likely to irritate the tender skin than pure wool. If knitted woollen vests are preferred, a vest of either soft muslin or cellular cotton should be worn under it.

Infant's Knitted Vest.

Shetland or 2-ply fingering wool. Fine-bone needles No. 10 or 11. Cast on 60 stitches. Knit first row plain. Knit 2, purl 2, all along the row.

Continue till singlet is about 9 inches long, then at the beginning of the next 2 rows cast on 6 stitches for the sleeves. Then knit plain every row for an inch. Then cast off all but 20 stitches.

Knit plainly backwards and forwards for the shoulder strap till it measures $4\frac{1}{2}$ inches long; then cast off. This completes one-half of

vest. Knit the other side exactly the same way. Now sew up the sides as far as the arm-hole—where the 6 stitches were cast on—and sew shoulder strap to opposing top of singlet.

Finish off neck and sleeves with crochet.

Round neck, crochet loops of 3 chain, putting the double crochet into every second stitch.

In the next row, one double crochet into one space, 1 chain 3 treble into next space, 1 chain 1 double crochet into next, and repeat all round.

Finish off sleeves with second row only.

Run narrow ribbon through holes round neck and tie in bow in front.

Petticoat.

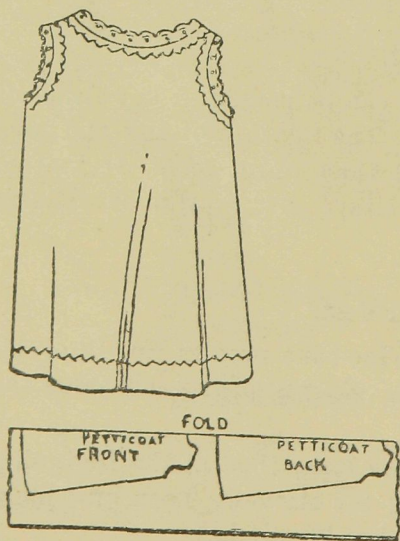
This takes the place of the long flannel, and is designed to last the child from birth for at least twelve months. For winter use light-weight flannel, wincey, or viyella; for summer, British fuji, cotton crepe, or silk.

Allow $1\frac{1}{2}$ yd. of 27 or 30 in. wide material.

Pattern represents a quarter of the garment, and is cut twice.

It can be fastened on the shoulders if desired. If this is done the shoulders must be cut a little longer to allow for overlapping.

The Cutting.—Fold the material to bring selvages together, and set pattern twice to the fold, as diagram shows. Cut one portion higher in the neck, and use this portion for the back.



Selvages of 30-in. material.

Length, when finished, should be 1 in. shorter than the dress; so if the dress is 22 in. long, the petticoat should be 21 in.

The Making.—Run and herring-bone the shoulder and side seams. Cut back down centre for placket from neck to a depth of 7 in. Put single wrap down left side of placket, and face right side with strip of material. Lap one edge over the other at the termination, and stitch firmly to strengthen. Turn in neck and arm holes and bottom edge about $\frac{1}{4}$ in. and herring-bone, then finish off with soft crochet edging.

Dress or Nightgown.

The same pattern is used for each of these garments, the only difference being in length.

Materials.—Nightgown: For summer, British fuji, fine crepe, or wineyette. For winter, winey or viyella.

Dress: For summer, crepe-de-chine, silk, cotton crepe, British fuji, cotton voile, or muslin. For winter, radianta, viyella or cashmere.

The pattern represents a quarter of the garment and is set on material folded in four.

Allow $1\frac{1}{2}$ yards of 27-in. material.

The Cutting.—Double the material to bring the cut edges together, then fold again to bring the selvages together, so gaining four thicknesses. Set the pattern to the fold as diagram shows.

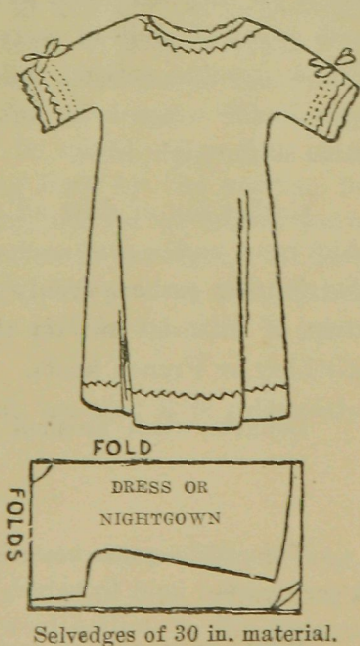
The Making.—Run the side and sleeve seams and herring-bone the raw edges down. Cut the back down the centre from the neck to a depth of 6 in. for the placket. Put single wrap down left side of placket and face right side with strip of material. Lap one side over the other at the termination and stitch firmly to strengthen.

Face in the neck with $\frac{3}{4}$ -in. strip of material and in this casing thread tape or ribbon to draw up. Turn up each sleeve edge about $\frac{1}{2}$ -in. and herring-bone, then 1 in. above the base arrange binding to take a draw tape or ribbon. Turn up bottom edge and herring-bone down.

To make sleeve sufficiently close-fitting, either gather or smock top of sleeve (where bow is shown on diagram), or arrange binding 1 in. from wrist to take a draw tape or ribbon (as illustrated).

As an alternative to ordinary hems, a crochet edging can be worked round neck, sleeves, and bottom of garment.

Length, when finished: Nightgown, 27 in.; dress, 19 to 22 in. as preferred. A length of 22 in. is sufficient for a big baby.

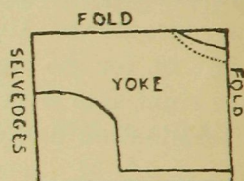
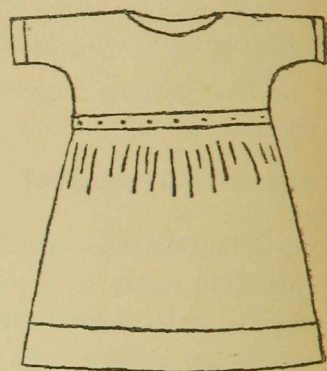


Dress (Alternative).

Pattern Magyar yoke design, with gathered skirt. Use delaine, nun's veiling, cashmere, silk, or cotton crepe. Allow $1\frac{1}{4}$ yd. of 27 or 30 in. wide material. Pattern represents half yoke.

The Cutting.—For skirt cut two widths of material each $18\frac{1}{2}$ in. in length. Cut down centre back of skirt 3 in. for placket. Width of skirt to be 44 to 46 in.

For the yoke, which should be $5\frac{1}{2}$ in. deep, fold the remainder of the material to bring cut edges together. Place the pattern to the folds as shown in diagram. Cut neck lower in the front, as shown by dotted line. Cut down centre back from neck to bottom of yoke.



The Making.—For skirt seam selvages together on both sides with French seams. Turn up hem. For yoke make French seams up both sides and sleeves. Bind neck with crosswise strip of material to form casing for ribbon to draw up. Finish opening at back with extra piece of material down right side and double wrap down left side, as given in pattern. Finish sleeves same as for nightdress.

Gather top of skirt all round and join it to yoke, making seams of skirt meet under arm seams of yoke, and have placket at centre back, distributing gathers evenly all round. Face inside of waist with $\frac{1}{2}$ -in. strip of material cut on the straight. Finish outside with feather-stitching or French knots.

Length, when finished, from shoulder to hem, 22 inches.

Jacket.

This little garment, which is so easily slipped on or taken off, is a very useful item in baby's wardrobe.

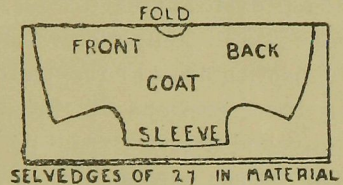
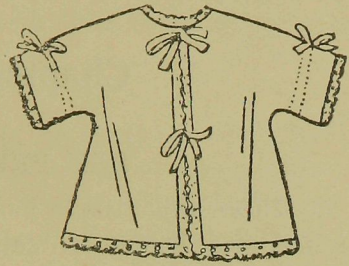
While in a car or tram, as the weather changes or the cool of evening comes, it can supply just the little extra warmth which is necessary for baby's comfort and welfare.

The pattern (one piece) Magyar design, fastening in front. Use flannel, viyella, delaine, nun's veiling, silk, or chepe de chene. Allow $\frac{3}{4}$ yard of 27-in. wide material. Pattern represents half garment.

Cutting.—Fold material to bring selv-edges together, place pattern to fold, as diagram.

Making.—Stitch sleeves and side seams, herring-bone down if of flannel; if other material, fell or make French seams. Finish sleeves as previously described. Cut front down centre from neck to lower edge.

Turn in all edges $\frac{1}{4}$ in., herring-bone if of flannel; if not of flannel face in edges, secure with fancy stitch. Border neck, sleeves, edge with soft lace or crochet edging. Suggested edging: 1 double crochet into material, 3 chain, 1 double crochet into material. Sew ribbons in front to tie in two places.



Bonnets.

For a young baby, knitted bonnets are very comfortable; for winter, made of wool; for summer, of silk or cotton. On no account should a handkerchief be pinned to the front of baby's bonnet, to hang down over his face when he is taken out. Mothers do this thinking it is necessary to protect baby's eyes in this way. What they do is to deprive him of fresh air, which he needs. The eyes of a young baby should be guarded from strong light by the position in which he is held. Later, when he can sit up, the hat or bonnet worn should be of a shape which affords protection to the eyes. At this age he is inclined to suck his bonnet strings. To prevent this, attach a short ribbon one side, carry under chin, and fasten with a press stud at the other side.

When baby is old enough to wear a hat, see that it is sufficiently large, and eyeletted for ventilation.

The Shawl.

In selecting or making a shawl do not choose a large open pattern. Baby gets his fingers tangled in it, and it irritates him. Do not get a very fluffy shawl, from which wisps of wool collect on his fingers, and from there may be carried to his mouth.

A square of radianta, cashmere, or kremlaine, hemstitched and embroidered, makes a very nice shawl. The former one better for summer; the latter for winter.

Chapter VII.—Sick Babies.

THE PREVENTION OF DISEASE.

There will always be some sick babies, but there would be many fewer sick babies if mothers would exercise a little more care in the prevention of disease. The two common causes of disease among babies and young children, which are responsible for a great number of deaths, are (1) respiratory infections in which the disease germs exist in the secretions of the mouth, nose, throat, and air-passages and are conveyed directly from person to person; (2) bowel infections, in which the disease germs exist in dirt and are conveyed into food by flies or in other ways.

Respiratory Infections.

The "common cold" is an infectious disease. Like influenza, measles, and whooping-cough, it is spread by coughing. Every time a person coughs or sneezes a fine spray containing disease germs is spread through the air all around him, and is breathed in by any persons near him. In this way they catch his disease, and this happens most easily in crowded ill-ventilated rooms.

There is another way in which these diseases can be spread. Very small children are constantly putting their fingers into their mouths or up to their noses. Imagine what would happen if their saliva and mucus contained a dark-blue dye. Their hands, faces, toys, and everything that they touched would be stained dark-blue. You can easily understand how any disease germs which they are carrying in their noses and throats are similarly smeared on everything they touch, and conveyed to other children. Have we not all seen little children poke the fingers they have been sucking into baby's face or mouth, while the mother sits by and makes no effort to prevent infection? Those dangerous diseases—diphtheria, scarlet fever, meningitis, and infantile paralysis—are spread mostly in this way. The worst spreaders of infection are not those who are very sick, but those who are not too sick to go about and mix with other people. Many carriers of disease are not sick at all.

Mothers should teach young children clean habits, for it would save many lives.

DIRT AND DISEASE.

Diseases due to careless disposal of excrement are very dangerous to little babies, and often cause their death. People who handle milk or milk dishes with unwashed hands, or leave milk exposed to flies

which have been where there is excrement, may unknowingly be responsible for giving the germs of these diseases to babies and children. Unless these germs get to people's mouths with food or in some other way they can do no harm.

Careful Habits.

To avoid these diseases one must be very careful that food, particularly milk, is clean and does not touch any dish or human hand that is not clean. A person's hands should always be washed before he handles food. The kitchen and all places where food is stored should be kept free from flies by screening the windows, doors, and food safes with wire gauze. A swatter should be kept ready for any fly that gets in when a careless person holds the screen door open.

Closets.

But above all, excrement itself must be disposed of only in a proper closet where it will not get scattered or be exposed to flies. The best system for cities is to have sewers. Where there is no sewer or septic tank it is necessary to have the pan system or the pit system. In either case the closet must be built so that no excrement can be scattered and no flies can get into the pan or the pit. The seat must have a lid that is kept closed, and there must be no holes through which flies, rats, or chickens can get in. The regulations of the Queensland Commissioner of Health require this, and show how an inexpensive sanitary closet can be built in the country.

Flies.

The common house-fly is a danger on account of his habit of going to excrement and afterwards walking with dirty feet on our food. It is not necessary to have flies in the house, for they can be kept out by screens. It is also possible to keep down the number of house-flies in the town or on the station by keeping them from breeding in horse manure, garbage, or other decomposing matter that can furnish the fly-maggots with food. It takes about ten days for a fly's egg to hatch, grow into a full-sized maggot (larva), pass through the chrysalis (pupa) stage, and come out as a full-grown fly. To prevent flies from breeding it is only necessary to make sure that no manure, garbage, or decaying matter is allowed to stay in town or near people's houses for more than a week. Manure cannot breed house-flies if spread thinly on a field for fertiliser. If there are many house-flies about, it is a good plan to find out where they are coming from by hunting for the maggots, and to get rid of their breeding-places. In towns the local authorities should see that fly-breeding places are not permitted.

There is another kind of fly, the common "bush fly" that is not so easily got rid of. It is very persistent, and has an unpleasant way of getting at a person's eyes and nose. It then may go to another

person's eye. In this way it can carry the germs of eye diseases. This fly should at least be kept out of schools and houses by screening so that it will have the least possible chance to spread eye diseases.

WHAT TO DO FOR SICK BABIES IF SKILLED ADVICE IS NOT AVAILABLE.

If you cannot get advice from a doctor or from a Baby Clinic, the directions given hereunder should be followed:—

General Treatment.—Sick babies need more fresh air than healthy babies. Never let the sick room get stuffy. Put baby in a corner out of the draught, and keep the window open, night and day.

The baby is sick when he vomits or has diarrhoea, and is seriously sick if he should any day have several loose green motions containing mucus and curds. Improper food is the commonest cause of such illness; therefore stop all food, and give cold boiled water, and a teaspoonful of castor oil. Consult your doctor, or go to the nearest Baby Clinic at once. In summer it is dangerous to wait.

In hot weather, two or three loose movements a day, even though the baby seems to be well, may indicate the beginning of serious illness. It is far easier to keep him well than to cure him when sick. If you are doubtful, take him to the Baby Clinic, if there is one in the district, or consult your doctor.

If baby is feverish, sponge him frequently in warm water, taking care not to chill him. Uncover and sponge only one part at a time—for example, one arm or the front of the body, leaving all the rest covered until that one part is sponged and dried. Then cover that portion before beginning on the next.

Give him as much boiled water as he likes to drink.

Do not worry if he is disinclined to take his usual amount of food for a day or two. A baby needs less food when he is ill.

If baby is sick, or even a little out of sorts, it is very necessary to get his bowels well moved. Even if he is not taking much nourishment, his bowels must be moved.

Adenoids.

Adenoids are something like enlarged tonsils, but enlarged tonsils can be seen, and adenoids are hidden at the back of the nose, between the nose and the back of the throat. A child with enlarged tonsils almost always suffers from adenoids also, but many have adenoids whose tonsils are not enlarged. They are, unfortunately, very common.

Although adenoids cannot be seen, the effects they produce are very visible. They block the air-passages and make it difficult to breathe through the nose. Usually the child becomes a mouth-breather. He sleeps with his mouth open, breathes heavily while asleep, and often

noisily, or snores. Often his sleep is restless and disturbed; sometimes he tosses and turns all through the night. If he gets a "cold" all these symptoms become worse.

A child with adenoids may persist in breathing through his nose and does not then become a mouth-breather. He suffers worse for this; owing to the effort to breathe through the obstructed nose his chest falls in at the sides, and he becomes "pigeon-breasted." To see this you have only to undress him.

Adenoids obstruct the air-passage between the ear and the back of the throat. Consequently these children have often some loss of hearing, which often passes unnoticed. Inflammation of the ear causing earache, and discharges from the ear in children are usually caused by adenoids. Nearly all cases of deafness in early life are due to neglected adenoids. Many of these children are thought to be inattentive and stupid, and do badly at school, but improve remarkably after their adenoids are removed.

If you have any suspicion that your child suffers from any of these troubles, do not fail to obtain medical advice.

Bronchitis.

If baby has a bad cold on the chest, and is feverish, put him to bed. If he has wheezy and quick breathing, he may have bronchitis.

To rub his back, chest, and sides with warm olive oil or camphorated oil may do baby good and cannot harm him. Take a little oil in the palm of the hand and rub gently and quickly for several minutes. Protect baby from draughts and keep him warm, but do not put too much covering over him if he feels hot and feverish.

"Colds."

"Colds" are infectious diseases spread from person to person. Those who are suffering or have recently suffered from "colds," or who frequently suffer from them, should not handle other people's babies. Babies should be protected from infection, which they are sure to acquire, if their mothers allow them to be fondled and kissed by all their relatives and friends and even by strangers. Especially should they be kept away from crowded rooms and evening entertainments, where in close air contaminated by many persons infection is almost sure to be encountered. To take babies to picture shows is very dangerous. No sensible, well-instructed mother who "loves her baby" would do such a thing. Handkerchiefs and spoons that have been used for others must not be used for babies. Do not blow on a baby's food to cool it. Do not kiss a baby on the mouth. Do not kiss him at all if you have a "cold." If any of your children have "colds," keep them away from the baby. A "cold" in a baby may lead to serious bronchitis or pneumonia, which are frequent causes of death in the very young.

If baby has a "cold," protect him from draughts and chills, but give him plenty of fresh air. Sponge him if he is feverish. If he is not feverish, take him out daily in the fresh air. Rub his chest night and morning with camphorated oil. Give him plenty of boiled water to drink. Do not feed him more frequently than usual. Avoid over-clothing, and muffling up round the neck, which not only makes him uncomfortable, but renders him more liable to catch "colds." If his nose is blocked with mucus you may clean its entrance with a little swab of cotton wool on a match stick.

If a child has adenoids or large tonsils, he is very susceptible to "colds," and should be taken to a doctor for advice.

Colic.

This is generally due to either over-feeding or unsuitable food, food taken too quickly, too hot, or too cold, dirty bottles or teats. It may also be caused by poisoning with powdery lead paint from veranda rails, &c.

A child with colic gets violent attacks of screaming, his legs are drawn up, and feet and hands are cold. Stop all food for the time being. To continue feeding the child makes him worse. Sitting the child up, with its abdomen and chest supported against its nurse's chest and left shoulder, and at the same time rubbing its back firmly, may give some relief. Apply warmth to abdomen, hands, and feet. If the colic is severe, give an enema of warm water; this generally gives relief by removing wind and irritating material.

Chicken-pox.

This is an infectious disease. It sometimes begins with slight fever, but frequently the rash appears without any other symptoms of illness. The spots are usually scattered, and are at first like small pimples; these later become tiny blisters, which quickly dry up into small scabs. The child need not be kept in bed unless feverish. Protect him from chills and draughts; give him light diet for a few days, see that his bowels act well daily, and prevent him from scratching the sores.

The child is infectious for three weeks.

"Cradle Cap" or Scurfy Patches on Babies' Heads.

Scurfy patches on a baby's head can be removed by gently rubbing the patches for a few moments with the tips of the fingers, dipped in vaseline or kerosene, followed at once by very gentle combing with a small-tooth comb, and by washing with warm water and mild "baby soap." Great care must be taken to avoid risks of fire with the kerosene, and irritation of the scalp by careless or rough combing, or by failing to wash the kerosene off at once.

Croup.

If baby gets croup, give him immediately a hot bath and a dose of castor oil. Be careful that he does not get a chill after the hot bath. (The water must not be too hot—test it with your elbow before putting baby into it.) Flannels wrung out of hot water and put round his throat will give relief; but care must be taken not to burn the skin.

Get advice from a doctor as soon as possible. What you think is simple croup may be diphtheria, and prompt treatment may be necessary to save the child's life.

Diarrhœa and Dysentery.

Diarrhœa is the passage of frequent, loose, watery, unhealthy motions. They may be merely soft and "mushy," or may consist mostly of water. They may contain much mucus or slime, or particles of undigested food. Their colour may be brown, yellow, or green. When medicine is being taken, they may be blackish. They may have an offensive smell, or they may be acid, scalding the buttocks.

The stools of a breast-fed baby are always soft, and sometimes two or three motions may be passed every day. If the motions are healthy there is no diarrhœa, but if they contain large white particles of undigested milk the baby is being overfed. The stools of a bottle-fed baby are firmer, and if he is passing two or three soft motions daily he is suffering from diarrhœa.

Putty-coloured motions, whether loose or constipated, are due to absence of bile. The baby must then be given no butter, oil or fat, and the cream must be taken off his milk. It may be necessary to put him on a special fat-free diet for a time.

Diarrhœa may be caused (1) by too much food, or by food that the baby is unable to digest; (2) by infection from germs which the baby has swallowed. At the beginning of a mild attack of diarrhœa the baby may appear quite well, but after a time, and in all bad attacks, he is restless, irritable, often feverish, often vomiting, and loses weight rapidly.

Diarrhœa is more common in summer, partly because the baby is more thirsty, and is given more milk when he really needs more water; partly because germs grow very quickly in his milk in hot weather; partly because disease germs are carried by flies to his food, teats, and dummies during this season.

Dysentery is a very dangerous epidemic disease which occurs **every summer** among babies in Queensland. In Brisbane it is at its worst during the months of November and December, but the months in which the yearly epidemic occurs are not the same in all our towns. At first it may be very like an ordinary diarrhœa, but it is easily recognised when the baby passes very frequent small motions containing blood

and slime, often with much straining. In a bad case there is high fever, much weakness, and grave danger of a fatal result. The germ which causes it is the dysentery bacillus, which is carried about by flies, and so spreads from house to house.

Prevention of Diarrhœa and Dysentery.

Do not overfeed babies in hot weather. Give them as much water to drink as they want. Be sure that the milk they are getting is clean and fresh. Keep it cool after you have boiled it. If you cannot get clean milk, substitute dried milk. Above all, keep the food, bottles, and teats **most carefully covered from flies** after they have been boiled. There is no way of keeping a baby's dummy free from flies. If you wish to keep your baby safe from infection, burn the dummy.

Treatment of Diarrhœa and Dysentery.

Give the baby a full teaspoonful of castor oil to clear out all undigested food. Stop all his food. Give him no milk of any sort, but as much water or thin barley water, which may be slightly sweetened, as he likes to drink. If the baby has been breast-fed, relieve the breasts by gently expressing the milk. If he is not well in twenty-four hours, get medical advice or take him to the nearest Baby Clinic.

For the benefit of those who may be very distant from medical or skilled nursing advice we give some further directions.

If the baby is breast-fed he may be kept on thin barley water for another day or two. Usually it is safe to give two short breast-feeds of five minutes each on the second or third day. Continue to give thin sweetened barley water freely, but resume breast-feeding very gradually as the motions improve.

If the baby is bottle-fed, cow's milk must not be given for several days, perhaps not for a week or two or even longer. Keep him on the barley water for a few days until he begins to improve. When the motions begin to be fewer and less watery, and he is no longer feverish, it will be safe to give him whey. If the baby is more than eight or nine months old the whey may not satisfy him, and he may have some sweetened arrowroot, cornflour, or sago made with water only. If still hungry a small finger of baked bread may be given occasionally after the whey. Continue these foods until the motions are becoming normal, when a tablespoonful of boiled milk may be given in the food or whey. If this passes through undigested, give no more milk for a day or two, then give it again. As soon as the milk is found to agree, it may be gradually increased each day, until the baby is taking his proper food. In mild cases of diarrhœa no medicine is necessary after the first dose of castor oil, but all cases are not mild. A few loose motions may be the beginning of a serious illness. In **dysentery** early medical treatment is most necessary.

All soiled napkins should be covered with disinfectant at once, and flies prevented from getting to them. After changing the napkin wash your hands carefully, or you may convey the disease to your other children.

Diphtheria.

See "Sore Throat."

Dirt-eating.

This is a dangerous habit, which is found in young children from eighteen months to three years of age. It is common in children suffering from hookworms, or sickly in other ways, but it occurs also in healthy children. The causes of this habit are not thoroughly understood, but one of them is probably the custom of feeding young children entirely on soft foods, and not giving them anything hard, such as baked bread, to bite.

It is dangerous because it leads children to swallow indigestible substances, or, what is worse, substances containing dangerous germs. In this way they may at any time become very ill from bowel disturbances. Some of them get repeated attacks of this sort.

Like all habits it is difficult to break. In fact it is almost impossible to get rid of it until the child gets older and has more sense. In very young children scolding and punishments are useless. Nor can you keep the child from danger by watching it, for it will swallow anything it can find in a moment, when you are not looking.

The only way to keep these little ones safe is to make sure that they cannot get hold of anything harmful. Make an enclosure in a room or on the veranda, a "kicking-pen" for the child to play in, and be sure that this enclosure is free from rubbish. Keep the child in this all the time, until he is old enough to be trusted outside. Also give him some nice hard crisp crusts or fingers of baked bread with his meals.

Eczema.

Eczema is a skin disease which sometimes affects babies. Some of the causes are improper feeding, chronic constipation, undue exposure to strong wind or bright sunshine on unusually delicate skins, or hereditary tendency.

Eczema may occur on any part of the skin, but breaks out chiefly in its folds, or on the head—especially on the cheeks, forehead, and scalp, and behind the ears. The skin is at first red and rough, then becomes broken and watery, then scabs form, but the raw surface between the scabs continues to weep—this weeping and crusting are the special characteristics of eczema.

A doctor's advice must be obtained for the treatment of eczema. If some time must elapse before the advice can be received, in the interval proceed as follows:—

Do not wash the affected skin with soap and water. It should be cleaned by applying olive oil with a soft cloth and dabbing off without rubbing. When healed, to prevent relapse, use only superfatted soap.

Remove all known sources of local irritation. To prevent scratching, cut a hole in the end of a pillow-case—put the baby's head through the hole; then secure the arms at the sides with a safety-pin, pinning together the front and back of the pillow-case between the arms and trunk. A similar row of pins may be used to fix the cover round the legs. Sometimes it is sufficient to bandage strips of pasteboard on the arms so as to prevent bending of the elbows.

Coax off any scabs or crusts after some hours' soaking with olive oil.

Protect the inflamed area by applying some simple, unirritating ointment, or recently boiled or perfectly fresh unsalted lard. This should be spread on butter-cloth, which may be made into a mask with holes for nose, eyes, &c. Change the dressing once or twice a day, using olive oil freely at the time of removal if there is the slightest tendency to stick.

An excellent simple ointment, for use in this and other conditions, may be made up as follows:—1 ounce white vaseline, 1 drachm zinc oxide, 1 drachm almond oil, and $\frac{1}{2}$ drachm lanoline.

All obstacles in the way of obtaining advice must be overcome. Where a doctor cannot come to the baby, one of the parents can usually manage to make a journey to consult him.

Care of Eyes.

Newborn babies are liable to grave inflammation of the eyes, which may cause blindness. This is due to infection at the time of birth. Therefore cleanse the eyelids and surroundings with special care as soon as the child is born.

Do not attempt to separate the lids, for fear of abrading the eyeballs and carrying in impurities. With the aid of a piece of "surgical gauze" or cotton-wool, or perfectly clean boiled rag, and plenty of warm boiled water, cleanse the lids thoroughly.

If preferred, boracic lotion may be used, or a doctor may order a stronger antiseptic—but perfect cleansing is the first essential.

On the slightest sign of redness or swelling about the eyelids—especially in the first week—or on any sign whatever of mattery discharge, call in a doctor at once, as immediate active treatment may be needed.

The discharge from an inflamed eye can infect other eyes, so the utmost care must be taken not to risk carrying, by fingers, towels, &c., any impurity from the bad eye to the sound eye of the baby, or to the eyes of any other person.

If a child squints, blinks, screws up its eyes, frowns, makes grimaces, has discharge from the eyes, or complains of continual headaches, take him to an eye surgeon or a hospital, not to a spectacle maker.

HOOKWORMS.

Hookworms are small white worms about half an inch long. They cling to the lining of the bowels of many people and gradually make them weak and pale by sucking blood and injecting a poison. If people have hookworms they are more likely to be dangerously sick when they get infectious diseases, such as pneumonia, measles, or typhoid fever. Children with many hookworms do not grow up the way they should, and are undersized and backward in school. But there is no need for anyone in Queensland to have hookworm disease.

How People get Hookworm Disease.

The hookworm—like those other enemies of man, the mosquito and the fly—cannot spend its whole life in one kind of place. The female hookworm lays over a thousand eggs a day in the human bowel, but none of them hatch there, and they could not hatch in the body if people swallowed them. When the bowel motions of people who have hookworms get on the ground through carelessness, ignorance, or bad bringing up, the eggs hatch. In about a week the little baby hookworms (larvæ), so small that we cannot see them without a microscope, stop growing and eating, and lie waiting for a chance to get into some human body. This chance will come when some person's skin touches the moist earth that they are in. Most of them die because this does not happen, but some get on the bare feet of children or grown-ups and quickly wriggle through the skin and float away in the blood. They finally find their way with the blood to the lungs and are coughed up and swallowed. When they reach the intestines they grow up and cause sickness, and lay thousands of eggs to keep the race of hookworms going as long as human bowel motions get on the ground.

Hookworm Disease and Rainfall.

Because the little hookworm larvæ can develop only in moist earth, hookworm disease is found only in people who live or have lived where there is an abundant rainfall. There is very little hookworm disease where less than 40 inches of rain falls in a year, and the disease is most common in farming areas where there is over 50 inches of rain each year, and wherever sugar-cane can be grown.

The Prevention of Hookworm Disease.

It is easy to prevent hookworm disease because the eggs can only hatch in earth, and they cannot do that unless people pollute the ground with bowel motions—a very dangerous thing to do. The secret of getting rid of the most serious of our tropical diseases lies in three words, "Stop soil pollution." To do this every house, school, or place of work should have a clean, fly-tight, rat-proof closet built in agreement with the regulations of the Commissioner of Health, and children should be taught never to pollute the ground. Children who live where there is hookworm disease can be protected if their premises are free from pollution and boots are worn whenever they go elsewhere. Hookworm larvæ are not able to go through boots in good repair. Going barefoot on the sea beach is safe, because hookworm larvæ cannot stand the salt water.

How to be Examined and Cured.

It is easy to find out whether one has hookworm disease, for the hookworm eggs can be seen in the bowel motion if it is examined with a microscope, and a small specimen can be sent for examination to the nearest Commonwealth or State public health laboratory. Parents can get a container in which a specimen can legally be sent through the mails by writing to the laboratory. If people have hookworm disease they can be cured by taking a medicine that kills the worms. This can be obtained from the family doctor or hospital.

Impetigo.

This is a very common skin trouble. It consists of matted blisters which dry into scabs, which may be as large as a threepenny bit. Sometimes the scabs fuse into large masses; more commonly they form separate spots, which are most abundant on the legs, arms, and face, though they may occur anywhere. The matter from one spot infects other places, and fresh spots appear wherever the child scratches. It is a purely external disease, and although the skin looks horrid the child may be very well.

Impetigo is easily cured. Ask your chemist for some **ammoniated mercury ointment**, and keep this constantly applied to the sores after removing the scabs by softening with olive oil. The ointment must be kept on the arms and legs by bandages; for the face it may be applied on a linen mask, or it may be sufficient to apply it at bedtime.

Sometimes impetigo is secondary to some other skin trouble and is not then so easily cured. If, therefore, the condition does not quickly improve, you must consult a doctor.

Lead Poisoning.

Among Queensland children lead poisoning is caused by paint on veranda railings, gates, fences, and other surfaces exposed to the weather.

The paint becomes powdery and comes off when handled. Young children put their fingers into their mouths very often; older children do so when they bite their nails; and so the poison is swallowed. Lead poisoning is never caused by drinking tank water. If you have any suspicion as to your veranda-rails or other outside painted surfaces, rub your hands over them, and see whether the paint comes off. There is now a regulation forbidding the use of lead paint on outside surfaces within the reach of children's fingers. Any chemist will tell you whether the paint outside your house is lead paint.

The most common symptoms of lead poisoning in children are—

- (1) Colicky pains worse at bedtime, usually refusal of food, often vomiting. Sometimes persistent vomiting occurs without pains. The attack may last several days or a week. After it is over, the child takes his usual food until the next attack.
- (2) Weakness of the legs, sudden giving way of the legs during walking, dropping of the toes owing to paralysis of the muscles of the front of the legs. In consequence the child trips easily, and has to lift his feet high as he walks.
- (3) Convulsions. These may be serious or fatal.
- (4) A squint may develop in a child who has not squinted before; he may also have headache or vomiting. If not taken to a doctor early he may *lose his sight and be blind for the rest of his life* as a result of inflammation and atrophy of his optic nerves.

The treatment of lead poisoning is removal of the child from the poison. Find out where your child got it; if in doubt, have the paint examined by a chemist. Having proved the source of the poison, there are only three things you can do—

- (1) Have it repainted with non-poisonous paint; or
- (2) Board off the painted surface so that the child cannot get to it; or
- (3) Leave the house.

Of course you will get medical treatment from your doctor or the hospital. But this will do no permanent good unless you prevent the child from getting more of the poison. Very often the child gets better in bed or in hospital, but gets a relapse after he gets up or comes home, and each attack is usually more severe than the one before.

Measles.

Measles is one of the infectious fevers. A child who has contracted measles seems, at first, to be suffering from a feverish cold: There is running from the eyes and nose, coughing and sneezing. The temperature may be high, and the child may seem very sick. The rash

appears three or four days later. It consists of blotchy red spots which show first behind the ears, and then spread to the face and body. When the rash begins to fade, the temperature generally falls.

The child should be put to bed in an airy, well-ventilated room; if possible he should have a room to himself. Give liquid diet while the temperature is high, and later on light diet. Protect the eyes from glare, see that bowels are well moved daily, and **most carefully avoid chill.**

The mouth and nostrils should be cleaned daily. Uncomplicated measles is not a serious disease, but if complications set in, it may become very serious indeed. Broncho-pneumonia is one serious complication, and discharging ears another.

The rash fades quickly, but the child must be kept in bed until he has lost his cough; he is infectious for twenty-one days after the rash has faded and he has left off coughing.

Mumps.

Mumps is an infectious disease. It usually begins with some feverishness, the glands below the ear become tender and swollen, and the swelling increases and extends over the side of the face. One or both sides may be affected.

If there is any fever keep the patient in bed, give light diet, attend to bowels, and avoid chills. If the pain is severe, fomentations may be applied, or gentle rubbing with warm oil may relieve. When the child is up it is well to avoid chilling, by tying a flannel round the swollen face.

The child is infectious for twenty-one days from the first appearance of the swelling; longer, if the swelling has not all disappeared.

Nits and Lice.

Nits are the eggs of the head-louse firmly attached to the hair, most often on the back of the head and behind the ears. The louse spreads from child to child. It causes much irritation and scratching which may lead to impetigo, followed by inflammation and swelling of the glands at the back of the neck. The impetigo may be cured with ammoniated mercury ointment, which also kills lice.

Lice are easily got rid of. Where only a few are present the daily use of a very fine comb is sufficient. When more numerous they may be killed with kerosene (the oil used in lamps) applied to the hair at bedtime and left on all night. **No lamp, candle, or raised flame** must be within 3 yards of the child while the kerosene is being rubbed in, or the child may be frightfully burnt. For the same reason **never use petrol (or benzene or motor spirit)** under any circumstances. Before applying the kerosene protect the skin of the back of the neck and behind the ears with a little vaseline or lard. Wash well next morning with soap and water.

Prolapse of the Lower End of the Bowel.

Sometimes, as the result of straining, the lower bowel is forced down outside the natural opening. If it does not go back of itself, anoint it with vaseline or oil, then press gently but firmly a clean napkin on the protrusion. It will nearly always go back, as soon as the child stops crying to take a deep breath. Then strap the buttocks together with a long broad strip of zinc oxide plaster. This may be replaced when necessary for several days, and should not prevent the bowels from acting. If you moisten the plaster with a little methylated spirit, when removing it, it comes off more easily. If you have not this plaster, make the child lie down on his side, and pass his motion into a napkin, while you pull the upper buttock to one side.

The bowels must be made to act regularly and the motions must not be allowed to become hard and lumpy. The most useful aperient is a teaspoonful or dessertspoonful (according to age) of petroleum oil given twice a day. As these cases are sometimes troublesome, it is well to get medical advice.

Ringworm.

This is a skin disease caused by a parasite, and it may affect either the scalp or the body.

Ringworm of the scalp is most difficult to cure, consequently a doctor must be consulted at once.

Ringworm of the body, in the early stages, can be cured by the daily application of tincture of iodine for a few days only, but if the condition does not quickly improve a doctor's advice must be sought.

Rickets

Is a disease in which the bones become soft and easily bent; the ends of the bones are enlarged; the head grows large and bossy and sweats profusely; the chest becomes deformed; convulsions are common, &c. It is due to the deficiency of a vitamin which is present in the cream of fresh milk, and very abundantly present in cod liver oil. It is a remarkable fact that sunlight enables the baby to keep well on a supply of this vitamin which would be quite insufficient for it if kept indoors in a dull climate. For this reason rickets, except in its mildest forms, is extremely rare in Australia. The diet should contain plenty of milk, not too much mush, and one or two teaspoonfuls of cod liver oil daily.

Rupture or Hernia.

A rupture is a small hole in the abdominal wall under the skin, through which is squeezed a bit of the bowel. The small hole is caused by a slight defect in development. The squeezing-out happens when the baby cries or strains and so contracts the abdominal muscles. Usually

the rupture goes back when the crying or straining ceases, but sometimes it remains down. It is a delusion that crying alone will cause a rupture, and this is a poor excuse for spoiling boy babies. The hole must be there before the rupture can get through. Two kinds of rupture occur in babies and small children.

Rupture of the Navel or Umbilical Hernia.

This can nearly always be cured before the baby is a year old by applying a broad strip of zinc oxide plaster. Other kinds of plaster may irritate the skin. When applying the plaster the skin should be drawn together, and you should ask your doctor or a clinic nurse to show you how to do this properly. When the plaster begins to wear loose, it should be replaced by a fresh strip. The plaster does not interfere with the baby's daily bath. Never let the rupture come down while you are replacing the plaster.

Rupture of the Groin or Inguinal Hernia.

This occurs in both sexes but is more common in boys. It can usually be controlled by a knotted skein of knitting wool. As the application of this can only be learnt by practice, you must be shown how to put it on by doctor or nurse. When this fails a small truss made by an instrument maker may succeed. This is more expensive, and as the baby grows a fresh truss will be needed. If the treatment is commenced early, and the rupture is never allowed to come down, many cases can be cured by the time the baby is a year old, because Nature is inclined to close the opening within the first year. The only alternative is an operation. After the first year, a cure by any other method is most unlikely, and an operation is advised.

Strangulated Hernia.

Sometimes the bowel is pushed so far that it becomes nipped or strangulated in the small hole and cannot be put back. This is a very serious accident, for it means a stoppage in the bowel, and unless this is speedily relieved, which probably means an operation, the child will surely die. In such a case every hour's delay increases the danger.

Scarlet Fever.

Scarlet fever is one of the infectious fevers. It usually begins with fever, headache, vomiting, and sore throat, followed quickly by the scarlet rash, which appears first on the chest.

Very serious complications, such as inflammation of the kidneys or of the ear, may arise in the course of this disease; so if it is suspected a doctor must be consulted at once. Until he arrives keep the patient in bed, give liquid diet while feverish, then milk diet, attend to bowels, and avoid chills.

The disease is very infectious, so the patient must be isolated for at least six weeks from the commencement of the disease.

Scurvy

is the disease caused by want of a vitamin which is present in fresh foods. The first sign of scurvy in a baby is nearly always tenderness in the legs. He cries when these are handled, or when he is bathed. They may become so tender that he is afraid to move them at all, and he may be thought to be paralysed, or to have fallen and broken some bone. The next sign is usually bleeding into the gums, which look as though they were bruised. More rarely blood is passed in the urine. A teaspoonful of fresh orange juice or sweetened lemon juice given every few hours cures this dreadful disease.

Sore Throat.

This may be quite a slight ailment, or due to the fact that the child has large tonsils, but it may mean that he is suffering from that most serious disease, diphtheria.

If a child who is complaining of sore throat seems otherwise well, plays about during the day, and sleeps well at night he may be suffering from simple sore throat, but it is better to take no chances. If he continues fretful and out of sorts, refusing food, and obviously ill, a doctor's advice must be obtained immediately. With diphtheria there may or may not be hoarseness and feverishness. Some of the worst cases are not at all feverish. If the child's throat is examined greyish white patches may be seen on the tonsils or back of the throat, but sometimes the patches are too far down to be visible. If this membrane spreads into the windpipe, the child suffers from diphtheritic croup, and unless it receives immediate treatment will almost certainly die. The only safe place for these children is a hospital, where a doctor is always close by, for death from suffocation may occur very quickly.

Diphtheria, if treated by antitoxin in the early stages, is almost always curable, but if allowed to go untreated, for even a few days, is frequently fatal. Only a doctor is able to give antitoxin. Every day's delay much increases the risk of death.

For mild sore throat give the treatment usual for any feverish condition.

Swollen Breasts.

Newly born infants of both sexes may get swelling of the breasts, which secrete a kind of milk.

The treatment for this condition is absolute rest for the part. Bathe the breasts once daily and apply over them a soft pad of cotton-wool, which must be held in place by a bandage. When handling or feeding the child carefully refrain from touching the part. Avoid all interference. Any attempt to squeeze the milk out may result in baby having an abscess of the breast, which may need to be opened. With careful handling the condition should soon improve of itself. If it does not, or if any inflammation should appear, a doctor must be consulted at once.

Whooping Cough.

This is an infectious disease which is sometimes fatal to young children, and the younger the child the greater the risk. Therefore, if whooping cough is about, every effort should be made to guard baby from the risk of infection. If one of your children gets the disease, ask your doctor to inoculate your baby against whooping cough.

It usually starts like an ordinary cold, but, instead of the cough lessening at the end of a few days, it increases and the "whoop" develops. This consists of a series of short coughs succeeding one another so rapidly that there is no time for an intake of breath. This is followed by a deep inspiration which causes the characteristic "whoop." But although the child may be suffering from whooping cough, the whoop may be entirely absent. Babies don't get the whoop. Therefore, if whooping cough is about, any child with a bad cough which comes on in fits, is worse at night, and ends in vomiting, is almost sure to be suffering from this illness.

Broncho-pneumonia and convulsion are complications of whooping cough. If the attack is severe, get a doctor's advice. If mild, the child need not be kept in bed but must be carefully guarded from chills.

Keep the child in bed while feverish. Fresh air is very necessary. If the child vomits with the attacks of coughing, it naturally follows that he loses a good deal of his nourishment. So it is wise to give him some light, easily digested food **after** the attacks, in the hope that digestion may be completed before the next fit of coughing.

THREADWORMS.

Children with threadworms generally suffer from an itchiness at the seat, especially at bedtime. This may make them restless and prevent them from going to sleep. The itchiness is caused by the worms coming out of the anus and crawling about. More serious symptoms from threadworms are extremely rare in Queensland. "Picking at the nose" is not a sign of worms.

The only way to be sure that a child has threadworms is to see them in the motions. This is not difficult. They are about the size of cotton thread, about half an inch long, and are probably alive and wriggle. All sorts of things in the motions, for instance the stringy parts of bananas, are sometimes mistaken by mothers for worms. If you are in doubt, put the things into a small bottle with methylated spirits and show them to your doctor. Children should not be given medicines for worms that they have not got.

Causes of Threadworms.

Every threadworm grows from an egg which has been swallowed. These eggs are very small and can be seen only with a microscope. The young child swallows some of these eggs accidentally, perhaps

from the fingers of another child. When the worms crawl out to lay their eggs and so cause itching, he crushes them with his fingers, which become covered with these invisible eggs. Even though the hands are washed clean, there remain many eggs under the finger-nails. All young children put their fingers into their mouths at times, and so they are continually reinfecting themselves, and increasing the number of their worms. Older children who suffer from worms will be found nearly always to have the habit of biting their nails.

Treatment of Threadworms.

If the worms are numerous, medical treatment will give relief. Strong medicines are necessary, and, as these may be dangerous, they should be given only under medical direction. Injections of strong salt and water (as much salt as the water will dissolve), given after the bowel has been emptied, will often bring away many worms, and these injections are harmless, if carefully given. If the child struggles, you may injure the bowel with the nozzle of the syringe and cause bleeding. Though many worms may be brought away by medical treatment, there are nearly always a few left behind. From these the child will probably reinfect himself, and in a few months may have as many as before.

The real cure of threadworms depends on the mother. Make the child sleep in good thick "combinations," so that his fingers cannot get at the worms to crush them. Smear some vaseline around the anus before he goes to bed to prevent the worms crawling and causing itching; or ask your doctor for some ointment which will kill the worms when they come out. If reinfection is prevented the few worms left will die out of themselves.

Chapter VIII.—Some Emergencies.

BURNS OR SCALDS.

Large burns are very dangerous, and may prove rapidly fatal from pain and shock. To relieve pain, before the arrival of a doctor, cover the burnt area with perfectly clean linen or cotton cloths, or cotton-wool, soaked in carron oil (equal parts of lime-water and raw linseed oil) or simple olive oil. Either of these may be improved and made antiseptic by the addition of an ounce ($1\frac{1}{2}$ tablespoonful) of oil of eucalyptus to the breakfast-cupful. Other soothing applications are vaseline or castor oil.

If these are not at hand, add a level tablespoonful of baking soda to a pint of warm water and apply soft cloths soaked in the solution. In any case, this is very soothing before any oily dressing is used.

N.B.—Never leave a young child in a room where there is a fire without a good fixed fireguard. Do not use flannelette for babies. Never leave a kettle or vessel containing hot water where a young child can pull it over. Never put hot water into an empty bath or tub, but put in cold water first. Many awful deaths would have been prevented by these simple precautions.

CHOKING.

Something has gone down the child's throat and stopped his breathing. Try to hook out the stuff which is blocking the breathing with the forefinger thrust far back over the tongue. It is usually within reach of the finger. If it has gone further, and the child is suffocating, hold him by the feet with the head down, and let someone give his chest a few firm squeezes, or put him across your knees with the head hanging down and squeeze his chest several times.

To restore breathing, if the child is blue and senseless after dislodging the obstruction, lay him flat on his back, with his head hanging back over a small thin pillow, or folded towel or coat, under the shoulder-blades, and practise artificial respiration. If no one at hand knows how to do this, it will suffice to squeeze the front and sides of the chest firmly with the open hands about fifteen times a minute—alternately squeezing and relaxing until the child begins to breathe. There should be distinct intervals between the squeezing, so as to afford time for expansion and the inrush of air. If a second person is at hand, the lower jaw and tongue should be drawn forward at the same time, while the head hangs back over the low pillow or folded towel. If "artificial respiration" does not restore breathing in a few minutes, put the child into a very warm bath (say, 110 deg. F., or as hot as can be just borne by the

elbow) for half a minute, and dash some cold water on the head and chest. Then roll him over and over in a dry towel and quickly resume artificial respiration.

CONVULSIONS.

Convulsions generally come from eating too much fruit, cake, or unsuitable food, but may also occur at the beginning of a serious illness especially with high fever.

Send for the doctor immediately. Get ready a warm bath: test it with your elbow to make sure that it is not too warm. Put into this a small bag (made like a blue-bag) containing mustard. The amount required is a tablespoonful of mustard to a bucketful of water. Squeeze this mustard bag well into the bath. Place the child in the bath, and apply a cold wet cloth to the head. Prevent chilling of the body by placing a towel over it in the water.

Give plenty of fresh air. If the convulsions continue, the child may remain in the bath for as long as ten minutes. Then take him out, dry quickly, wrap him in a blanket, and put him in bed. Give an enema to get the bowels moved, and, as soon as the child can swallow, give a dose of castor oil.

CUTS.

Bathe in hot water to arrest the bleeding. Then bring the edges of the cut as near together as possible. Apply a pad of clean soft gauze or old linen, and bandage firmly. The cut may be first covered with a small piece of gauze or linen soaked in "Friar's Balsam" (Tincture of Benzoin), if you have it handy. If the cut is very long or very deep it will probably need stitches; less scar will be left if this is done.

If it becomes inflamed, fomentations must be applied, and renewed about every four hours.

THINGS IN THE EAR.

Children sometimes push things into their ears. As it is very easy to injure the ear and cause permanent deafness, no attempt must be made to remove the foreign body. Take the child immediately to a doctor. If you cannot do this, you may syringe the ear with warm water.

If an insect gets into the ear pour in a little sweet oil.

THINGS IN THE EYE.

Only slight accidents should be dealt with at home, as it is very easy to injure the eye. If there is difficulty a doctor must be consulted.

Should such things as a piece of dirt or a minute cinder get into the eye, make the child look down, press gently with a match-stick on the base of the upper lid, and turn the lid back over this. The lower lid should simply be pulled down. Then, if the object is visible, it can be removed with the corner of a handkerchief or a wisp of cotton-wool.

THINGS IN THE NOSE.

Children sometimes push things up their nostrils. If old enough, the child must be told to blow his nose vigorously. No instrument must be used. If vigorous blowing is not successful, the child must be taken to a doctor.

HARD THINGS SWALLOWED.

Children sometimes swallow such things as buttons, coins, pins, fruit-stones, &c. If this happens, do not give castor oil or opening medicine, but at once give some stodgy dry food, such as dry bread, suet pudding, bun, or potatoes. This is given to cover the object, and so prevent its sharp edges from doing harm. The motions must be carefully watched until the object is found, or the child may be sent to a hospital to be examined by X rays.

POISONS.

Dangerous, perhaps fatal, accidents occur usually from want of care. Small children are likely to taste and swallow any liquid they see lying about in cups or even in tins. Therefore keep all dangerous fluids carefully out of their reach.

The substances most likely to be swallowed are carbolic acid, lysol, caustic soda, white ant poison, and strong acids, all of which are deadly poisons. Kerosene should also be kept out of children's way. Should any of these things be swallowed, for **caustic soda** give vinegar or limejuice in water; **strong acids**, give bicarbonate of soda stirred up in water, or some washing soda dissolved in warm water; **all other poisons**, an emetic of common salt and mustard, a large teaspoonful of each stirred up in a large cupful of water.

You will of course send for a doctor or take the child to a hospital, but you should give the emetic first, and repeat it if necessary.

TREATMENT OF POISONS.

Send for the doctor, name the drug suspected,
 Keep any cup where poison is suspected.
 In every case, whate'er the poison be,
 You may give water, milk, and eggs, and tea.
 Oils may be used, but two exceptions lie,
 In phosphorus poisoning and in Spanish fly.
 In every case where staining* is not found
 To give emetics is both safe and sound.
 So mix at once—be quick, but don't be flustered—
 Two tablespoons of salt, or one of mustard.
 If stains are present, then proceed with care,
 And of emetics most of all beware.
 The poison known, to make the patient placid,
 For alkali corrosives, give an acid.
 An acid swallowed, then reverse the matter,

* Of the lips and mouth by strong acids or alkalis.

And give an alkali to kill the latter.
The acid antidotes in household use
Are table vinegar, and lemon juice.
What alkalies to use, need no revealing—
Take whitewash, chalk, or plaster from the ceiling.
Carbolic acid poisoning, to make the patient easier,
Give tablespoons two of sulphate of magnesia.*
In opium poisoning he snores like some old Druid,
Give him a teaspoon of Condry's Fluid (well diluted with water).
In strychnine—opium; when there's long stagnation
Resort to artificial respiration.

* Epsom salts.

F.T., in the Kensington Infirmary N.L. Magazine.

BLEEDING FROM EARS OR NOSE.

If after a heavy fall, or accident, there should be bleeding from the ears or nose call in a doctor **at once**, as this may be a most serious matter.

If a child bleeds from the nose habitually, keep him from picking his nose, and insert a small plug of cotton wool, covered with vaseline, into the nostril that bleeds.

Chapter IX.—Simple Recipes.

By spoonfuls are meant flat Clinic spoonfuls. If you do not measure correctly, you must not expect right results.

ALBUMEN WATER.

Put the white of an egg on to a plate, and with a knife or clean scissors cut across in various directions, to cut it into a number of small pieces. Then whisk slightly (not enough to convert it into froth), add 10 oz. (half a pint) of cold boiled water, a small pinch of salt, and a teaspoonful of sugar; strain through coarse muslin. Albumen water should be given only when it is advised by some competent person.

LIME WATER.

Thoroughly stir one tablespoonful of freshly slaked lime into half a gallon of boiled water; cover to keep out falling particles. After twelve hours, pour off the water and throw it away, as it contains any impurities present. A thick cream of lime will remain at the bottom of the vessel. Again add $\frac{1}{2}$ gallon of boiled water, stir for three minutes, and allow it to stand, covered as before, for twelve hours. The clear fluid is lime water, which should be carefully poured off and bottled for future use.

HOME-MADE LEMONADE.

Dissolve three teaspoonfuls of sugar in one pint of cold boiled water. Add three teaspoonfuls of lemon juice, and stir.

TAMARIND FRUIT DRINK.

Pour one pint of boiling water over the contents of five or six large tamarind pods. Stand till cool. Strain through muslin or cheese-cloth. Then add one or two flat clinic tablespoonfuls of sugar. This should be prepared fresh every day.

TARTARIC ACID SYRUP.

Two pounds sugar, $1\frac{1}{4}$ oz. tartaric acid, two and a-half teaspoonfuls essence of lemon, one pint boiling water. Place sugar and tartaric acid in jug, and pour on boiling water. When dissolved and quite cool, add essence of lemon, and bottle for use. To one tumbler of water add three teaspoonfuls of the syrup.

FRUIT-ACID TOOTH-WASH.

Dissolve one flat teaspoonful of acid tartrate of potash and two or three small saccharin tablets (obtained from a chemist) in one pint of

hot water. This is inexpensive and suitable for schools and institutions, but it will not keep more than a few days. For household use obtain some fruit-acid tooth-wash tablets from a chemist. Dissolve one tablet in two tablespoonfuls (or 1 oz.) of water.

TO PREPARE FRUIT JUICE FOR ARTIFICIALLY FED BABIES.

Squeeze juice of a clean, sweet orange and strain through perfectly clean muslin. Dilute at first by giving equal parts of juice and boiled water.

Lemon juice is equally good, but requires further dilution and the addition of sugar to sweeten.

CARROT OR SWEDE TURNIP JUICE.

Wash a carrot or a swede turnip, dip in boiling water for half a minute, grate, just cover with cold boiled water. Stand for two hours, strain, give the amount ordered undiluted or diluted.

BARLEY WATER.

One and a-half tablespoonful of pearl barley, wash well, and put in a saucepan with one pint of cold water. Add a pinch of salt. Simmer gently for one hour; strain through perfectly clean muslin. Make up to one pint with boiled water. Sweeten slightly. Barley water will not keep. It must be freshly made twice a day, and kept in a cool place.

VEGETABLE BROTH.

Three level teaspoonfuls pearl barley or rice, one small carrot sliced, one small potato, four leaves spinach or silver beet, pinch of salt. Boil all together for two hours, or until thoroughly cooked. Strain through sieve. Amount of broth should be 3 oz. when cooked. For use, add equal quantity of milk, and heat.

MUTTON BROTH.

Two pounds neck mutton; three pints of water; a little salt. Cut meat small, break bones. Cover with water, add salt, allow to stand for half an hour, bring slowly to the boil, and allow to simmer gently for three to four hours; strain, allow to get cold, remove fat, and reheat with a teaspoonful of rice or barley to each cup of broth. Simmer gently for half an hour for rice, and longer if barley is used.

PRUNE JUICE.

Wash prunes well; soak overnight. Boil one hour, and strain.

PRUNE PULP.

Same as above. Then remove stones, and press pulp through a sieve. Eighteen prunes make about seven teaspoonfuls of pulp.

APPLE PULP.

Bake an apple well until quite soft. Remove skin and core. Pass through sieve; add a little sugar.

BAKED FLOUR OR FLOUR BALL.

Tie a cupful of flour tightly in a cloth, and boil slowly for six hours. Take the flour out of the cloth, removing the outer crust. The inner part should then be broken up into small pieces, and spread out on a large dish. Place in oven and bake slowly, until it is crisp right through, and a pale biscuit colour. While hot, crush to a powder with a rolling-pin. Store in airtight jar.

To prepare the food, mix two teaspoonfuls of the powder to a smooth paste with a little cold water. Add 8 oz. of boiling milk mixture, stirring all the time. Put mixture back into saucepan, and boil for five minutes.

PREPARATION OF BEAN SPROUTS OR OTHER GERMINATED CEREALS.

Soak some beans, dried peas, barley, or wheat in cold boiled water in a flat dish over night. Spread them out so as not to cover each other. In the morning drain off the water and cover with a double thickness of gauze. Keep damp by adding a little boiled water as needed.

The sprouts will appear in about forty-eight hours. They are ready to eat when they are one or two inches long. Bean sprouts are palatable and very nutritious.

Cooking.—Boil or steam the sprouted seeds like any other green vegetable for fifteen minutes, adding the salt when nearly cooked. For small children rub them through a sieve. For older children this is not necessary. Serve with white sauce or with a little butter.

N.B.—If the peas, beans, or cereals are dead, they will not sprout.

STEAMED FISH.

Place $\frac{1}{4}$ lb. of fish between two plates, with two tablespoonfuls of milk and a pinch of salt. Steam over a saucepan of boiling water for from ten to fifteen minutes. Serve with a little white sauce.

MUTTON STEW.

A scrag end of mutton with most of the fat removed is chopped into short lengths and put into a saucepan with two or three cups of cold water. To this is added a good-sized carrot, a parsnip, a turnip, an onion, and two tablespoonfuls of barley. Simmer for two or three hours, stirring occasionally as the barley is apt to stick to the saucepan. A little salt is added just at the last.

MINCED TRIPE.

Cleanse the tripe, and pass it and a peeled onion through a mincing machine. Sprinkle with salt, and put in a saucepan with a

little water. Simmer for three hours. Blend $1\frac{1}{2}$ tablespoonfuls of flour smoothly with a cup of milk; add this to the tripe and stir till it boils. Simmer ten minutes longer and serve.

MINCED LIVER.

Prepare and cook same as minced tripe, but simmer for two hours instead of three.

COD-LIVER OIL AND EMULSIONS OF COD-LIVER OIL.

These must be kept in a cool, dark place. If they are left exposed to the light, the vitamin value is affected.

JUNKET.

This is very easily made by adding sufficient rennet essence or tablets to warm fresh milk, and keeping it warm till it goes solid. Only perfectly fresh sweet milk should be used. The junket may be sweetened and flavoured.

WHEY.

To make 12 oz. of whey, put 18 oz. of milk in a jug, and stand the jug in a saucepan of hot water until the milk is blood heat (100 deg. F.). Take the jug from the saucepan, and stir into it a teaspoonful of best rennet, or a junket tablet dissolved in a little water. Allow to stand for a few minutes until firmly set. Then break curd up with a fork. Allow the whey to drip through a piece of clean boiled cotton fabric, for instance a handkerchief. Do not squeeze the curd. Put the whey in a small saucepan, bring it to the boil. Take it off and cool it in a clean jug.

CUSTARD.

Milk—6 oz. or 12 tablespoonfuls, 1 egg, 1 teaspoonful sugar.

Method.—Beat the egg. Heat milk to nearly boiling point, then pour over the well-beaten egg and sugar, stirring all the time. Pour into a jug, stand jug in a saucepan of boiling water, stirring the custard one way till it thickens. Be very careful not to allow the custard to boil, as it will curdle and be spoilt.

RAW MEAT JUICE.

Take 4 oz. of good raw meat. Scrape finely, and put into a jug with four tablespoonfuls of cold water and a pinch of salt. Stand in a cool place for one hour. Strain through muslin.

The meat must be perfectly fresh and clean, otherwise it is dangerous. Raw meat juice should be given only when ordered by a doctor.

BARLEY JELLY.

Rub two and a-half level tablespoonfuls of patent barley into a paste with cold water, and make up to half-pint by stirring in boiling

water. Add a pinch of salt. Boil in double saucepan, with lid on, for one hour. While hot strain through perfectly clean gauze or a very fine wire gauze gravy strainer into a scalded jug. Cover with gauze. Make fresh supply daily.

RICE JELLY.

Make the same as Barley Jelly, substituting ground rice for patent barley.

OAT JELLY.

Soak three level tablespoonfuls of oatmeal in half-pint of warm water for one hour. Add a pinch of salt. Boil for one hour in double saucepan, with lid on. While hot strain through perfectly clean gauze or a very fine wire gauze gravy strainer into a scalded jug. Cover with gauze. Make fresh supply daily.

BAKED BREAD.

Cut a slice of bread, remove crusts, and cut bread into fingers. Place in a moderate oven; bake until faintly browned, and the bread is quite crisp and will break like a fresh biscuit. Crusts may be baked until hard and crisp. For older children bake the whole slice, crust and all.

OATCAKE.

Mix together two small cups of fine oatmeal, half a teaspoonful of salt, and half a teaspoonful of sugar. Make a hole in the centre of this, and add to it a quarter of a cup of boiling water. Mix quickly into a dough, turn on to a board well sprinkled with meal. Work very little, roll out as thin as possible, cut into pieces, and bake on a griddle or hot plate until crisp.

Oatcakes, if not freshly made, should always be toasted a little before the fire so that they are quite crisp.

CODDLED EGG (for Children).

Place egg in boiling water, cover, and remove saucepan immediately from fire, leaving egg in the water for five minutes.

Part III.—MATERNITY.

Advice for Expectant Mothers.

HEALTHY MOTHERHOOD.

One of the most wonderful things in life is to be the strong and healthy mother of a strong and healthy baby. Many women, fortunately, are given this great joy, but many more would attain it, if they would take a little trouble to learn how to take better care of themselves before their babies were born. It is very rare for a woman to die from her confinement, but everyone must have heard of such cases. Many of these deaths would have been prevented if the mothers had had proper care before their confinements. The want of this ante-natal care may lead to the mother being seriously ill after the confinement, and perhaps more or less of an invalid, just when health and strength are most wanted for the sake of her children. Sometimes also we see a strong healthy woman with a weakly, miserable baby. Ante-natal care will lessen the number of these sad and sorrowful happenings. Most women are never healthier or happier than during pregnancy. For a few it is a time of discomfort, which may be much relieved by ante-natal care. Even those in apparently good health may develop kidney disease, which is one of the greatest dangers of maternity, one that should be carefully looked for, so that mother and infant may be saved. The expectant mother's teeth should be carefully examined. Her food should be carefully regulated, for many neglect to take the right sort of food for the development of a healthy baby. The mother should always be examined beforehand to find out whether the child lies in the right position, and whether she is likely to have an easy delivery. All these things are most important.

Therefore, every woman, as soon as she suspects she is pregnant, should consult her medical adviser to make sure that she is in a fit state to bring a healthy child into the world, and to ensure for herself a normal pregnancy, and should report either to him, or to an ante-natal clinic, once a month during the first six months, and once a fortnight during the last three months of her pregnancy, that her progress may be watched and her urine may be tested at each visit. All maternity hospitals have ante-natal clinics. In Brisbane a fully-qualified woman doctor holds an ante-natal clinic at the Woolloongabba Baby Clinic on Tuesday evenings, and at the Valley Baby Clinic on Thursday evenings. Any expectant mother who fails to obtain ante-natal advice is needlessly risking her own health and her baby's health.

Every woman should realise the importance of having her urine tested, for by this test early warning is given of causes of danger to herself and her child, and steps can be taken by the doctor or nurse that the danger may be averted and the pregnancy and delivery brought to a safe conclusion.

Women who are deformed in any way—who have abdominal tumours, who have suffered from spinal or bone disease, or who have suffered from any form of ill-health in the past—should especially have early medical attention.

The expectant mother **should consult her doctor immediately** if at any time during her pregnancy she notices—Persistent headaches; dimness of vision; diminution in quantity of urine; frequency of passing urine; scalding when passing urine; swelling of the feet and legs; pain in the abdomen; vomiting which persists after the third month; a discharge of blood from the vagina at any time during the pregnancy; fits or St. Vitus' dance.

If the expectant mother follows this advice, avails herself of the facilities of the ante-natal clinics, and carries out the following simple health rules, she does all she possibly can for her own health and for that of her child.

PROBABLE DATE OF CONFINEMENT.

In a healthy woman, with proper care and attention, a confinement should be perfectly natural and without danger.

The natural period of pregnancy in woman is about 280 days.

A simple method of calculating the probable date of confinement is given in the table which follows,—worked out for every day in the year:—

Date when last menstrual period began. <i>January</i> Probable date of confinement. <i>October</i>	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<i>January.</i>
.. .. <i>February</i> <i>November</i>	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<i>November.</i>
.. .. <i>March</i> <i>December</i>	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<i>February.</i> <i>December.</i>
.. .. <i>April</i> <i>January</i>	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<i>March.</i> <i>January.</i>
.. .. <i>May</i> <i>February</i>	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<i>April.</i> <i>February.</i>
.. .. <i>June</i> <i>March</i>	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<i>May.</i> <i>March.</i>
.. .. <i>July</i> <i>April</i>	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<i>June.</i> <i>April.</i>
.. .. <i>August</i> <i>May</i>	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<i>July.</i> <i>May.</i>
.. .. <i>September</i> <i>June</i>	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<i>August.</i> <i>June.</i>
.. .. <i>October</i> <i>July</i>	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<i>September.</i> <i>July.</i>
.. .. <i>November</i> <i>August</i>	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<i>October.</i> <i>August.</i>
.. .. <i>December</i> <i>September</i>	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<i>November.</i> <i>September.</i>
.. .. <i>January</i> <i>October</i>	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<i>December.</i> <i>October.</i>

Quickening, or the first time the mother can feel the baby moving, occurs at about four and a-half months.

HEALTH RULES DURING PREGNANCY AND NURSING.

Dr. Truby King says—"The normal woman is never safer, healthier, happier, or more uplifted than during pregnancy."

But for the woman to be safe, healthy, and happy at this time, certain laws of health have to be obeyed, and it is necessary for the expectant mother to acquaint herself with these. They are, in reality, the same rules that should at all times be observed to maintain the highest standard of health, but, during pregnancy, the woman's responsibility is increased because she now has another, a helpless life, dependent on her own.

The essentials are—

Fresh Air, Day and Night.

1. The unborn child is nourished by the mother's blood; the mother's blood is, very largely, purified by the air she breathes. Unless the rooms in which she lives are at all times well ventilated, it follows that the blood is not sufficiently purified, and not only the health of the mother, but that of the child also, must suffer. Ventilation means a constant current of fresh air through a room. Draughts can be avoided by means of screens.

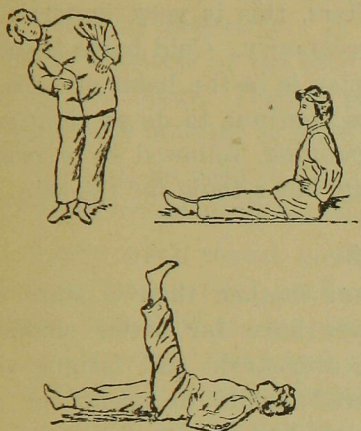
Exercise and Special Exercises.

2. Exercise is a special need of the pregnant woman. It is not sufficient to take exercise only by performing the daily household duties; and for no reason, except illness, should a woman shut herself indoors at this time. Daily outdoor exercise is a necessity for her health. Whenever possible, a daily walk should be taken, and if it is too hot to go out in the daytime the walk should be taken in the cool of the evening. But exercise must not be excessive. The woman should be healthily tired, not fatigued.

Special Exercises.

3. A most important adjunct to outdoor exercise for women is to do regularly, for five or ten minutes every morning and evening, half a dozen simple exercises specially designed for promoting the growth and strength of the abdominal muscles and toning up the internal organs. This tends to promote an easy, natural labour, and good digestion and regularity of bowels both before and after childbirth.

The best forms of exercise are such as ensure slow, systematic bending movements of the trunk, backwards and forwards and from side to side, and systematic deep breathing (see illustration—top figure). Lying flat on the back may be followed by elevating first one leg then the other, as shown in the lower figure. This may be made easy at first by putting the tip of the stationary foot under some fixed object, such as a chest of drawers. Slow, deliberate rising from the lying-down into the sitting-up posture (middle figure) is also made easier by fixing the feet.



From Ashton's "Gynecology," published by W. B. Saunders and Co.

The mother should gradually get herself into proper form and training, and the exercises should always be done very slowly. Too much should not be attempted at first—three or four minutes, morning and evening, would suffice to start with. Suitable exercises are best learned from the Clinic nurses or other competent teachers. The little trouble involved will be repaid a hundredfold to the mother in her own health, safety, and comfort, while the unborn babe will reap equal benefit.

Care of the Teeth.

4. As soon as a woman knows she is pregnant, she should visit a dentist, and have any necessary fillings, extractions, &c., attended to at once, and at this period it can be done without any risk to her health. Delay in seeking such attention is frequently the cause of a great deal of suffering, in the later months of pregnancy, from neuralgia and toothache. Also, if extractions are done during the later months, there may be some risk of shock to the mother. When the teeth are decayed, even if they are not painful, they are a serious danger to the health of mother and child. Poisons are absorbed from the decaying teeth into the blood, and it is from this poisoned blood that the body of the mother must be nourished, and that of the child built. The teeth must, of course, always be brushed night and morning.

When an expectant mother in the Metropolitan district cannot afford to consult a dentist in private practice, she should attend the Dental Hospital, George street, near Government Printing Office, where she will receive attention.

Bathing.

5. Daily bathing or sponging of the whole body is necessary. This keeps the pores of the skin acting, and as the skin is one of the means by which the body gets rid of waste matters, this is very important. Very hot baths should be avoided during pregnancy. Cold baths should not be suddenly commenced, but if the woman is in the habit of taking cold baths regularly it will not hurt her to continue to do so right up to the time of delivery. Cool or warm sponging, followed by a brisk rub with a coarse towel, is not only cleansing, but a tonic for the skin.

Rest and Sleep.

6. Nothing is worse for the expectant mother than a state of lazy inactivity. Busy, working housewives have far better confinements than less active women. However, over-strain and fatigue are injurious. As much time as can be spared should be spent out of doors—good, active walking (not mere sauntering or dawdling) being followed by a rest, sitting or reclining in the open air, pleasantly interested or occupied, not fretting or worrying.

As pregnancy advances, the mother should lie on a couch, with her feet up, after each meal; also after walking and whenever tired. An hour of such rest, morning and afternoon, is one of the best preventives of varicose veins, "white swelling" of legs, and piles.

A sufficiency of sound, unbroken sleep is a boon at all times, but for the expectant mother it is doubly important. Not only are the mother's nerves soothed during sleep, but the building of the baby goes on best during these times of peace and quiet. Nerves which are properly refreshed by sleep have no craving for drugs or stimulants. The expectant mother cannot be too strongly warned against the habit of taking "headache cures," sedatives, or stimulants, such as beer or stout, or strong tea or coffee.

Care and Preparation of Breasts.

7. The breasts must have daily care for some months before childbirth. If this is neglected, there is much more risk of cracked nipples, or even breast abscess, after baby is born. Bathe the breasts daily with cool water, or use warm and cold alternately, finishing with the cold. Brush the nipples with a rough washer, using a good soap. This quickly hardens them, and helps to prevent trouble later. The nipples must also be pulled out and shaped between the finger and thumb. This is very necessary in the case of badly shaped or inverted nipples.

During the last two months, after the daily treatment, rub in a little olive oil and methylated spirits—mixed in equal parts. This daily care and attention, before delivery, may prevent much trouble for both mother and child later.

Diet.

8. The diet of a pregnant woman should be simple and nourishing.

Alcohol in any form (wine, beer, or spirits) is harmful to both mother and child, and should not be taken. Abundance of plain cold water is very necessary. It is by means of the fluids we drink that the waste matters of the body are got rid of through the skin, kidneys, bowels, and lungs. During pregnancy there is an increased accumulation of waste matters, so more fluid is necessary.

There is no need to "eat for two." To eat more than the appetite demanded would probably only result in an attack of indigestion.

Three good varied meals a day are sufficient. Meat should be taken in moderation, preferably only once daily. The diet should include from half to one pint of milk (either to drink or in puddings, &c.), eggs, wholemeal bread or prepared bran or bemax, and plenty of fresh fruit and green vegetables. These are necessary for the vitamins they contain (see "Vitamins") and for their laxative effect.

Bowels.

9. There should be a daily action of the bowels. If this does not occur regularly about the same hour every day, take at night 10 drops of liquid extract of cascara. If this is not enough, try 15 drops, increasing to 20 drops if needed. If this is not sufficient, medical advice should be sought. Castor oil should not be taken, and strong purgatives are dangerous.

Liquid paraffin is also useful, and may be taken in tablespoon doses twice or three times daily. If cascara be taken, an endeavour should be made to decrease gradually the daily dose until none is required.

Diet is of great importance in the treatment of constipation. For effective action the bowel must receive a certain amount of bulky material, which is provided by such valuable articles of diet as wholemeal bread, fresh fruit, green vegetables, cereals, and bran.

For instance, if two or three tablespoonfuls of bran (which can be bought specially prepared) be eaten at breakfast, green vegetables and fruit at midday, fruit at the evening meal, and wholemeal bread substituted for white bread, sufficient bulky material is provided, and no normal woman, even during pregnancy, should be constipated. Many waste and poisonous products are removed from the body by the bowels, so it should be the aim of the pregnant woman to prevent constipation, so that there may be no need of purgatives.

Urine.

10. It has already been stated that the expectant mother should drink plenty of fluid. The kidneys as well as the bowels remove waste

matters from the body, and, as in pregnancy these waste matters are increased, every assistance should be given the kidneys. This may be done by drinking plenty of water.

The mother should watch for diminution in the amount of urine, frequent passing of urine, or any pain or scalding on passing urine. If she notices any one of these, she should report to her doctor or her Clinic. It cannot be urged too strongly that she have her urine examined at frequent intervals, so that, if anything not quite normal be found, serious consequences to her or her child may be averted.

Clothing.

11. This should be light and loose. The garments should be suspended from the shoulders, with no constricting bands at the waist. There should be nothing that could interfere with deep breathing.

If a woman has been accustomed to wearing corsets, she should not discard them when she becomes pregnant. After the third month maternity corsets should be worn.

Stockings should be secured by suspenders attached to a suspender belt if corsets are not worn. Garters should be discarded, as they interfere with the circulation and tend to cause swelling of the legs.

Foot comfort is essential, so shoes must be of the low-heeled variety. It is not possible for any woman wearing high-heeled, pointed-toed shoes to take the amount of daily exercise that is necessary for her health.

SOME COMPLICATIONS OF PREGNANCY.

Morning Sickness.

This is a common accompaniment of the early months of pregnancy. To try to prevent it, keep the bowels acting regularly, and have abundance of fresh air.

Remain in bed for a short time after waking in the morning, and, if possible, have a cup of tea and a little dry toast before getting up. This frequently helps a good deal. If the vomiting should be excessive, or should persist, a doctor must be consulted.

Miscarriage, or Premature Delivery.

If a pregnant woman complains of a bearing-down sensation, or has recurring pains, she should go to bed and rest quietly there until the symptoms have disappeared. If there is any discharge of blood, she must at once go to bed and send for a doctor.

A woman who has had a miscarriage needs to take special care during a subsequent pregnancy, as there may be a tendency to miscarry again at the same period. For example, if the miscarriage occurred at the fourth month, the woman should, in the later pregnancy, be

specially careful at that particular time; and if there are any symptoms, such as backache or bearing-down sensations, she must go to bed immediately and rest quietly for about a week, or until all such symptoms have gone. If they persist, a doctor's advice must be sought. Neglect of this may lead to further miscarriage.

Other conditions for which the advice of a doctor must be sought have already been given, and cannot be stressed too strongly.

PREPARATION FOR CONFINEMENT.

A medical attendant and nurse should be engaged as early as possible. The bedroom should be bright and well ventilated, with as little furniture as possible. Linoleum should be used in preference to carpet.

There should be a separate single bed with firm mattress for the patient and another for the nurse where these are obtainable.

The following articles should be provided:—

At least two complete changes of bed linen, eight soft turkey towels, a sheet of macintosh, or American cloth—4 feet wide, and long enough to go across the bed; three binders $1\frac{1}{4}$ yard long and 21 inches wide; twelve diapers of soft material; 1 lb. of sterile absorbent wool. All these articles should be kept in a clean special box with lid to protect them from dust.

A firm, large nail-brush, and three or four hand or enamel wash-basins.

Several pieces of thread or narrow tape 2 feet long.

A scrupulously clean shawl or blanket to receive baby.

Sponges and flannels should not be used for washing the mother during the confinement.

N.B.—All underclothing, binders, napkins, towels, cloths, thread, or tape, sheets, and linen, likely to come in contact with either the mother or baby, must be well washed and boiled before being put into the special box in which they are to be kept for the confinement.

THE CONFINEMENT.

The nurse should be sent for when there are recurring pains with a bearing-down strain, when there is a "show" or a feeling that the child has changed its position.

At the beginning of labour pains, a large clean jug should be filled with boiling water and put aside to cool, covered with a clean towel. The patient should also have a warm bath, and the bowels should be well moved; a dose of castor oil is best. Constipation will delay labour.

Should no medical attendant or nurse be present when the baby is born, the attendant should wash her hands well and tie the navel cord in two places, one 2 inches from the baby, and the other 2 inches further along the cord; she should then cut the cord between the ties. If there is any bleeding from the cut ends, the cord should be tied again. The end of the cord attached to the child should be covered at once with sterilised absorbent wool or a piece of clean boiled linen.

The baby's eyes should be washed with clean water, the child wrapped in a warm shawl and placed in a basket or cot.

The patient should then be placed on her back, and the afterbirth allowed to come away naturally. No attempt should be made to get the afterbirth away by pulling upon the cord. After expulsion the afterbirth should be lifted away from the patient and put aside for inspection by the medical attendant.

The attendant should again wash her hands before washing the patient with clean warm water, and drying her with a clean towel. Diaper should be put on, sheets and nightgown changed, and the binder firmly applied. The patient must be kept quiet and allowed to rest or to sleep.

For the first twenty-four hours napkins and diapers should be changed every few hours. The attendant's hands must always be carefully washed before handling the patient.

Urine should be passed about eight hours after confinement and several times a day for the next few days. If the bladder cannot be emptied at the end of twenty-four hours, medical assistance should be obtained.

Every woman should avoid heavy work or violent exercise for at least eight weeks after confinement.

THE NURSING MOTHER.

As soon after the labour as the mother has had a rest, the baby should be put first to one breast then to the other, remaining at each one for about two minutes. This should be done every six hours during the first day, and every four hours during the second day, so that the secretion of milk may be stimulated, and the baby may be taught to suck. Thereafter the baby should be put to alternate breasts every three or four hours during the day, being given its last feed at 10 o'clock at night.

Insufficient milk may be due to the nurse not putting the baby to the breast soon enough, and not persevering.

If, owing to flat nipples, or the baby's lack of sucking power, milk cannot be secured at first, a skilled nurse will be able to express the

milk and feed it to the baby regularly as long as may be necessary. In feeding premature babies this can be continued for weeks until the baby is strong enough to suck for itself.

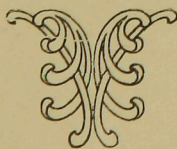
In all cases where the baby cannot (owing to weakness, prematurity, or flat nipples) or will not suck properly, skilled expression and special treatment to promote and maintain the flow of milk is essential, and full advantage should be taken of the help so readily given at the Baby Clinics.

The nipples must be kept scrupulously clean; they should be washed with water which has been boiled and cooled, before and after each sucking, and dried carefully. After nursing, a clean piece of soft muslin should be placed over them to prevent them from chafing, or soiling the clothing with milk.

Diet should be light for two or three days after confinement. One of the commonest mistakes of the first few days after childbirth is overfeeding the mother, which may cause indigestion, constipation, and headache.

Throughout the period of nursing the mother needs a simple and nutritious diet, which should include fruit, vegetables, plenty of fluid—one or two pints more than she would take when not nursing—but no alcohol; “stout” and similar beverages should be avoided. A tumbler of cold water should be taken before each nursing.

Good plain food and regular out-of-door exercise are the best means of improving the milk supply of the mother.



"I have no name :
I am but two days old."
—What shall I call thee ?
"I happy am :
Joy is my name."
—Sweet joy befall thee !

Pretty joy !
Sweet joy but two days old !
Sweet joy I call thee.
Thou dost smile :
I sing the while,
Sweet joy befall thee !

